Science, Mathematics and Computer Science Magnet Program

MONTGOMERY BLAIR HIGH SCHOOL
Application Timeline

- November 4: Applications Due
- December 3: Testing
  - December 4: Special Needs/Make-Up Testing
  - December 8: Make-Up Testing
  - Snow Dates one week later
- December 9: Teacher Recs Due (provide to teachers one month earlier)
- Early February: Notification Letters Mailed
Eligibility

• Must be a current 8th grade student
• Must complete Algebra 1 by the end of grade 8
• Must reside in Montgomery County within one of the following clusters at time of application:
  ▶ DCC
  ▶ NEC
  ▶ BCC
  ▶ Churchill
  ▶ Walter Johnson
  ▶ Richard Montgomery
  ▶ Rockville
  ▶ Sherwood
  ▶ Whitman
  ▶ Wootton
Magnet vs. Honors/AP

- Interdisciplinary instruction
- Advanced coursework beyond Honors/AP
- Expectation of going beyond requirements
- Depth vs. Breadth
- Independent Research
Courses

- Mathematics
- Science
- Computer Science
- Interdisciplinary (Research and Engineering)
- Non-magnet Courses
  - Social Studies
  - English/Reading
  - Physical Education
  - Electives
Mathematics: Required Courses

Magnet Geometry A/B
Precalculus A/B/C
Analysis 1 A/B
Electives

Precalculus A/B/C
Analysis 1 A/B
Analysis 2 A/B and/or Electives
Electives

Functions A/B
Analysis 1 A/B
Analysis 2 A/B and/or Electives
Electives
Mathematics: Elective Courses

- Analysis 2
- Linear Algebra
- Advanced Geometry
- Applied Statistics
- Modeling and Simulation
- Discrete Mathematics
- Complex Analysis
- Logic
- Senior Seminar in Statistical Research
Science: Required Courses and Electives

- Advanced Science 1: Physics
- Advanced Science 2: Chemistry
- Advanced Science 3: Earth Space Systems
- Advanced Science 4: Biology

Electives:
- Plate Tectonics / Oceanography
- Astronomy
- Cellular Physiology
- Optics
- Thermodynamics
- Quantum Physics
- Analytical Chemistry
- Introduction to Physical Chemistry
- Genetics
- Marine Biology
- Immunology
- Biological Chemistry
- Organic Chemistry
- Entomology
Computer Science: Required Courses and Electives

- Fundamentals of Computer Science A/B
- Algorithms and Data Structures A/B

Electives:
- Analysis of Algorithms
- Computer Graphics
- Software Design
- Modeling and Simulation
- AI / LISP
- 3-D Computer Graphics
- Computational Methods
Interdisciplinary: Required Courses and Electives

- Research and Experimentation 1 A/B
- Principles of Engineering A (Grade 10)
- Principles of Engineering B (Grade 11)
- Senior Research Project
- Robotics
- Material Science
- Origins of Science
Magnet Schedule

- 8 Classes – 3:20 dismissal
- 5 Classes per day
- Core courses blocked in 9th grade
- Extracurricular activities
- Afternoon buses at 3:20 (M-F) and 4:45 (T-Th)
Student Support

- Academic Peers
- Study Hall
- Lunch Support
- Counseling & Career Center
- Academic Support
- College Admissions
Extracurricular Activities

AALEAD  
ABC Club  
Africa Club  
Art & Science Club  
Bible Fellowship Club  
Biology Club  
Bio-Science Club  
Blair Bowling  
Blair Crew  
Blair Sports Academy  
Blair Network  
Communications Board  
Games Club  
Ceramics Club  
Chemistry Club  
Chess Club  
Computer Club  
Cyber Security Club  
Economics Club  
Envirotown  
Film Club  
Flag Squad  
Forensics/Public Speaking  
Gay/Straight Alliance  
Global Culture Club  
Green Club  
Hip-Hop Club  
Hispanic Club  
I Care  
Indian Club  
International Cancer Alliance  
International Club  
InToneNation  
Intramural Field Hockey  
Intramural Floor Hockey  
It's Academic  
Japanese Club  
Jewish Culture Club  
Key Club  
Korean Club  
Learn a Language Club  
Lego Mindsorm Club  
Latin Club  
Linguistics Club  
Marching Band  
Martial Arts Club  
Math Team  
Minority Scholars Program  
Mock Trial  
Model United Nations  
Montgomery Blair Players  
Muggle Quidditch  
Muslim Student Association  
National Arts Honor Society  
National French Honor Society  
National Honor Society  
National Science Honor Society  
National Spanish Honor Society  
No Labels Diversity Workshop  
Ocean Science Bowl  
One Act Plays  
Peer Tutors  
Philosophy Club  
Photography Club  
Physics Team  
Pit Orchestra  
Red Cross Club  
Robotics Team  
Rubik's Cube Club  
Science Bowl  
Shakespeare Club  
Sign Language Club  
Silver Chips  
Silver Quill  
Smart Snacks Club  
Stage Crew  
STEM Club  
Step Club  
Student Government Association  
Students for Global Responsibility  
Super Leaders  
Theater Productions  
Thespians Club  
Tri-M  
Ultimate Frisbee Club  
Vietnamese Club  
WEB Dubois Honor Society  
Weight Training Club  
Women's Advocacy  
Yearbook  
Yoga Club  
Youth Ambassadors  
Youth and Government  
Youth for Music
Application

- Due November 4
- Application Packet
- Section 1: Biographical Information
- Section 2: Student Activities
- Section 3: Signature
- Section 4: Student Essay
- Teacher Recommendations
Testing

- December 3, 8:00-11:00 (Snow Date December 10)
- Mathematics
- Reading Comprehension
- Writing
Special Needs or Make-up Testing

- Special Needs Testing December 4, 8:00 – 11:00 @ Richard Montgomery HS (Snow date December 11)
- Special Needs Documentation
- Make-Up Testing: December 7 (Snow date December 14)
Selection Process

- Student Information
- Selection Committee
- Decision Letters
- Appeals
Student Population

- About 100 students per grade level
- Students from over 30 middle schools
- Students from about 15 different countries
Recent Accomplishments

- Excellence in Gifted & Talented Education Award, Maryland Department of Education
- Thirty Eight National Merit Scholarship Semifinalists in class of 2017
- 2012, 2014 & 2016 Davidson Fellowship Winners
- Nine 2016 Intel Semi-finalists, Two finalists
- Ten 2015 Siemens Competition Semi-finalists
- Alumni selected as 2009 and 2014 MacArthur Fellows
- Students competing at the national & international level in swimming, fencing, skating, wushu, skiing, chess, ...
Class of 2016 College Acceptances

- Amherst College
- Becker College
- Boston University
- Brandeis University
- Brown University
- Bryn Mawr College
- UC Berkeley
- UC Davis
- UCLA
- UC San Diego
- Cal Tech
- Carnegie Mellon
- Case Western Reserve University
- Catholic University
- Champlain College
- University of Chicago
- Clark University
- University of Colorado
- Colombia University
- University of Connecticut
- Cornell University
- Dartmouth University
- Davidson College
- University of Delaware
- Denison College
- Dickinson College
- DigiPen
- Drexel University
- Duke University
- Emory University
- Embry-Riddle University
- Florida Inst. Of Technology
- Fordham University
- Georgetown University
- Georgia Tech
- Goucher College
- Grinnell College
- Hamilton College
- Harvard University
- Harvey Mudd College
- Haverford College
- Howard University
- University of Illinois
- Johns Hopkins University
- Julliard School
- Kenyon College
- Kettering University
- Macalester College
- McDaniel College
- UMBC
- UMD College Park
- MIT
- University of Michigan
- University of Minnesota
- University of Mississippi
- Mount Holyoke College
- New England Conservatory of Music
- New York University
- UNC Chapel Hill
- North Carolina State University
- Northeastern University
- Northwestern University
- Oberlin College
- Ohio State University
- University of Pennsylvania
- Penn State
- University of Pittsburgh
- Princeton University
- Purdue University
- Rensselaer Polytechnic
- Rice University
- Rose-Hullman Institute of Technology
- St. Mary’s College of MD
- Savannah College of Art and Design
- Scripps College
- Smith College
- University of Southern California
- Stanford University
- Syracuse University
- Temple University
- Tufts University
- Tulane University
- University of Utah
- Vanderbilt University
- University of Virginia
- Virginia Tech
- Wake Forest University
- Walla Walla University
- University of Washington
- Washington University in St. Louis
- George Washington University
- Whitman College
- University of Wisconsin
- Worcester Polytechnic
- Yale University
Does your child...

... not only know the answers, but asks the questions?
Does your child…

... have not just good ideas, but wild and silly ones?
Does your child...

...answer questions with detail and elaboration?
Does your child…

… construct abstractions and draw inferences?
Does your child...

... initiate projects and create new designs?
Does your child...

... critique himself or herself?
Contact Information

- Peter Ostrander, Coordinator
- 301-649-8240
- Peter_M_Ostrander@mcpsmd.org
- www.mbhs.edu
- @blairmagnet