Science, Mathematics and Computer Science Magnet Program

MONTGOMERY BLAIR HIGH SCHOOL
Application Timeline

- November 1 Applications Due
- December 7: Testing
  - December 8: Special Needs/Make-Up Testing
  - Snow Dates one week later
- December 6: Teacher Recs Due
- 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: 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
- Advanced Topics in Earth Science
- Astronomy
- Cellular Physiology
- Optics
- Thermodynamics
- Quantum Physics
- Analytical Chemistry
- Introduction to Physical Chemistry
- Genetics
- Marine Biology
- Immunology
- Biological Chemistry
- Organic Chemistry
- Entomology
- Chemistry of Art
- Neuroscience
- Neuroscience
Computer Science: Required Courses and Electives

Required Courses:
- Fundamentals of Computer Science A/B
- Algorithms and Data Structures A/B
- Analysis of Algorithms

Electives:
- Computer Graphics
- Software Design
- Modeling and Simulation
- AI / LISP
- Cyber Security
- 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

ABC Club
Africa Club
Art & Science Club
Astronomy 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
Envirothon
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
Mu Alpha Theta (Math Honor)
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
Science Olympiad
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
Due November 1

Application Packet – Online through MyMCPS Parent Portal
  - Biographical Information
  - Student Activities
  - Signature
  - Student Essay (<200 words)

Teacher Recommendations
Testing

- CogAT
- December 7, 8:00-11:00 (Snow Date December 14)
- Computer based exam with a handful of modules
- Above grade level exam aimed at reasoning and problem solving ability
- Writing exam
Special Needs or Make-up Testing

- Special Needs Testing December 8, 8:00 – 11:00 @ Richard Montgomery HS (Snow date December 15)
- Special Needs Documentation
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

- 36 National Merit Scholarship Semifinalists in Blair class of 2019
- Eight 2019 Regeneron Scholars, Three finalists
- Student member of US Team placing 1st at 2019 International Mathematical Olympiad
- 2012 – 2018 Top Ten finish at American Regions Mathematics League
- 2017-2019 It’s Academic Champion
- Top student in the UMD Mathematics Competition 2015-2018
- 2018 2nd place, 2017 1st place & 2016 3rd place at NYU Tandon School of Engineering cybersecurity competition
Blair...Then Where?

Universities:
- UC Berkeley
- Stanford
- Harvey Mudd
- Cal Tech
- UCLA
- Southern California
- UC San Diego
- Colorado School of Mines
- Lewis and Clark
- Chicago
- Oberlin
- Pittsburgh
- Carnegie Mellon
- RIT
- RPI
- Cornell
- MIT
- Brown
- Yale
- NYU
- Columbia
- Princeton
- UPenn
- JHU
- UMBC
- Michigan
- Harvard
- Georgia Tech
- Rice
- Vanderbilt
- VA Tech
- UMD-CP
- Georgetown
- Rose-Hulman
- Grinnell
Class of 2019 College Acceptances

- Arizona State University
- Barnard College
- Baylor University
- Boston College
- Boston University
- Brandeis University
- Brown University
- UC Berkeley
- UCLA
- UC San Diego
- UC Santa Barbara
- UC Santa Cruz
- Cal Poly
- Cal Tech
- Carnegie Mellon
- Case Western Reserve
- Catholic University
- University of Chicago
- University of Cincinnati
- Colby College
- Colorado School of Mines
- Colombia University
- University of Connecticut
- Cornell University
- University of Delaware
- Drexel University
- Duke University
- Florida Institute of Technology
- Fordham University
- Georgetown University
- Georgia Tech
- Grinnell College
- Harvard University
- Harvey Mudd College
- Howard University
- University of Illinois
- Johns Hopkins University
- Lewis & Clark College
- UMBC
- UMD College Park
- MIT
- University of Michigan
- Michigan State University
- University of Minnesota
- University of Missouri - Kansas City
- Mount Holyoke College
- New York University
- UNC Chapel Hill
- North Carolina State University
- Northeastern University
- Northwestern University
- Oberlin College
- Occidental College
- Ohio State University
- Olin College
- University of Pennsylvania
- Penn State
- University of Pittsburgh
- Pomona College
- Princeton University
- Purdue University
- Rensselaer Polytechnic
- Rice University
- University of Richmond
- University of Rochester
- Rochester Institute of Technology
- Rose-Hulman Institute of Technology
- Rutgers University
- University of South Alabama
- University of South Carolina
- University of Southern California
- Stanford University
- Stony Brook University
- Temple University
- University of Texas
- Tufts University
- Vanderbilt University
- University of Virginia
- Virginia Commonwealth University
- Virginia Tech
- Wake Forest University
- University of Washington
- Washington University in St. Louis
- George Washington University
- College of William and Mary
- University of Wisconsin
- Worcester Polytechnic Institute
- 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