SCIENCE, MATHEMATICS AND COMPUTER SCIENCE MAGNET PROGRAM

Montgomery Blair High School
APPLICATION TIMELINE

• November 8: Applications Due
• December 7: Testing
  – December 8: Special Needs/Make-Up Testing
  – December 11: Make-Up Testing
  – Snow Dates one week later
• December 13: Teacher Recs Due (provide to teachers one month earlier)
• Early February: Notification Letters Mailed
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 (Multivariable Calculus)
- Linear Algebra
- Advanced Geometry
- Applied Statistics
- Modeling and Simulation
- Discrete Mathematics
- Complex Analysis
- Logic
SCIENCE: REQUIRED COURSES AND ELECTIVES

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

Required Courses:
- Plate Tectonics / Oceanography
- Quantum Physics
- Astronomy
- Analytical Chemistry
- Cellular Physiology
- Introduction to Physical Chemistry
- Organic Chemistry
- Optics
- Genetics
- Thermodynamics
- Marine Biology
- Entomology
COMPUTER SCIENCE: REQUIRED COURSES AND ELECTIVES

Fundamentals of Computer Science A/B

Algorithms and Data Structures A/B

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 – 3:00 dismissal
• 5 Classes per day
• Core courses blocked in 9th
• Extracurricular activities
• Afternoon buses at 3:00 (M-F) and 4:25 (T-Th)
STUDENT SUPPORT

• Academic Peers
• Study Hall
• Lunch Support
• Counseling & Career Center
• Academic Support
• College Admissions
EXTRACURRICULAR ACTIVITIES

AALEAD
Africa Club
African American Culture Club
Art Club
Badminton Club
Blair Ambassadors
Blair Bible Fellowship
Blair Christian Fellowship
Blair Crew
Blair Sports Academy
Blair Network Communications
Blazer Choir
Ceramics Club
Chemistry Club
Chess Club
Chinese Club
Club StepOne
Comedy Sketch Club
Computer Club
Costume Club
Create With Care

Envirothon
Ethiopian Club
Fashion Club
Flag Squad
Forensics/Speech Club
French Honor Society
Frisbee Club
Gay/Straight Alliance
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
Italian Club
Japanese Club
Jewish Culture Club
Key Club
Korean Club
Learn a Language Club

Latin Club
Logic Club
Marching Band
Martial Arts Club
Math Team
MBUG
Mentor Programs
Mock Trial
Model United Nations
Montgomery Blair Players
Muslim Student Association
National Arts Honor Society
National Honor Society
Ocean Science Bowl
Operation Fly
Peer Tutors
Philosophy Club
Photography Club
Physics Team
Pit Orchestra
Psychology Club
Rebuilding Together
Red Cross Club
Robotics Team
Safety Committee

Science Bowl
Science Honor Society
Shakespeare Club
Sign Language Club
Silver Chips
Silver Quest
Silver Quill
SISTERS
Smart Snacks Club
Spanish Honor Society
Stage Crew
Student Government Association
Students for Global Responsibility
Super Leaders
Theater Productions
Thespians Club
Tri-M
Vietnamese Club
Web Design Club
WEB Dubois Honor Society
Weight Training Club
Women’s Advocacy
Yearbook
Youth and Government
APPLICATION

• Due November 8
• Application Packet
• Section 1: Biographical Information
• Section 2: Student Activities
• Section 3: Signature
• Section 4: Student Essay
• Teacher Recommendations
TESTING

- December 7, 8:00-11:00 (Snow Date December 14)
- Mathematics
- Reading Comprehension
- Writing
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
- Make-Up Testing: December 11 (Snow date December 18)
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
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 20 different countries
RECENT ACCOMPLISHMENTS

- Excellence in Gifted & Talented Education Award, Maryland Department of Education
- Thirty-four 2012-13 National Merit Scholarship Semifinalists
- 2012 Davidson Fellowship Winner
- 2012 ISEF Second Award, Biological Sciences, 2013 ISEF NASA Special Award First Place Winner
- 2012 & 2013 DC Regional Junior Science and Humanities Symposium Winners, National Third Place Awards
- Two 2013 Grand Prize Winners Montgomery Area Science Fair
- Five 2013 Intel Semi-finalists (One Finalist)
- Nine 2012 Siemens Competition Semi-finalists, One regional Finalist & Third Place National Winner
- 2012 First Place Montgomery County, Second Place Maryland Envirothon
- 2011 & 2013 American Computer Science League Senior Division First Place
- 2011 & 2013 Silver Medalist, International Physics Olympiad
- 2013 Seventh Place American Regions Mathematics League
- 2013 Fifth Place NAQT National Championship Tournament
- 2013 Sixth Place Moody’s Mega Math Modeling Challenge
- Students competing at the national & international level in swimming, fencing, speed skating, wushu, skiing, chess, …
BLAIR...THEN WHERE?
CLASS OF 2013 COLLEGE ACCEPTANCES

- University of Alabama
- Barnard College
- Binghamton University
- Boston College
- Boston Conservatory
- Boston University
- Brown University
- Bucknell University
- UC Berkeley
- UC Davis
- UCLA
- UC San Diego
- Cal Tech
- Carleton College
- Carnegie Mellon
- Case Western Reserve
- University of Chicago
- Colorado College
- Colombia University
- Cornell University
- Dartmouth University
- University of Delaware
- Drexel University
- Duke University
- Emory University
- Fordham University
- Franklin & Marshall College
- Georgetown University
- Georgia Tech
- Goucher College
- Green Mountain College
- Grinnell College
- Guilford College
- Harvard University
- Harvey Mudd College
- Howard University
- University of Illinois
- Johns Hopkins University
- Juilliard School
- Juniata College
- Lewis & Clark College
- James Madison University
- UMBC
- UMD College Park
- MIT
- McGill University
- University of Michigan
- University of Minnesota
- Morehouse College
- New York University
- UNC Chapel Hill
- Northeastern University
- Northwestern University
- Oberlin College
- University of Pennsylvania
- Penn State University
- University of Pittsburgh
- Point Park University
- Princeton University
- Purdue University
- Rensselaer Polytechnic
- Rice University
- University of Richmond
- University of Rochester
- Rochester Institute of Technology
- St. Mary’s College or MD
- Skidmore College
- Smith College
- Spelman College
- Stanford University
- Stony Brook University
- University of Southern California
- Syracuse University
- Temple University
- Tufts University
- Tulane University
- Vanderbilt University
- University of Vermont
- University of Virginia
- Virginia Tech
- University of Washington
- George Washington University
- Washington University in St. Louis
- Wellesley College
- Wesleyan University
- College of William & Mary
- Williams College
- Warren Wilson 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

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