

**Earle B. Wood Middle School  
8<sup>th</sup> Grade Course Description Booklet  
School Year 2021-2022**



**Earle B. Wood Middle School  
14615 Bauer Drive  
Rockville, MD 20853**

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## **Welcome to Eighth Grade Earle B. Wood Middle School**

### **Administration**

**Ms. Heidi Slatcoff**, Principal  
**Dr. Natasha Booms**, Principal Intern  
**Dr. Augustine Kang**, Assistant Principal  
**Ms. Edwina Kollo**, Assistant Principal

Earle B. Wood Middle School students receive a rigorous and comprehensive academic program at every grade level. There are eight class periods daily. All students take courses in math, world studies, science, English and physical education.

All students participate in a physical education program every year and have health for one quarter.

Our students have the opportunity to sample a variety of rigorous 21<sup>st</sup> century courses throughout their three years in our electives program. These range from courses in computers, engineering and design to courses in the visual and performing arts.

Earle B. Wood Middle School is a global access school with 21<sup>st</sup> century white-board technology in each classroom. Teachers and students have access to high technology research and publishing possibilities.

The Wood staff is concerned with the whole child and helps to ensure healthy development through an extra-curricular program. The many after school activities include academic support, intramural sports, athletic teams, music ensembles, and other topics of student interests such as; Science, Technology, Engineering, Art, and Mathematics (S.T.E.A.M), drama and robotics clubs, such as the Lego League Club, and The Mustang Marauders Airplane Club. The Student Government Association (SGA) presents an excellent opportunity for children to become involved in their school. Many teachers stay after school to provide individual academic support. Activity buses are available on Tuesday, Wednesday, and Thursday for students who stay for an organized activity or who work with a teacher.

The Counseling Department works with the grade-level teams to implement a successful educational program for each child. Counselors for every grade level meet with individual students, run counseling groups, and visit classrooms to address important topics. They are available to consult with, and support, parents to facilitate a positive overall school experience for their students.

**Ms. Amy Davis**, Resource Counselor  
**Ms. Keyosha Lewis**, 6<sup>th</sup> grade Counselor  
**Ms. April Tegeler**, 7<sup>th</sup> grade Counselor  
**Ms. Grace Fernandez**, 8<sup>th</sup> grade Counselor  
**Ms. Linda Albrecht**, Counseling Secretary/Registrar

## Registration

Building upon the knowledge and skills acquired in previous years, students are encouraged to pursue a well rounded, rigorous program of studies based on their individual interests and abilities. The **2021-2022** Course Description Booklet contains information on the instructional program that will be offered. It is designed to be a guide for parents and students as they register for the next year.

The Course Description Booklet contains a complete listing of courses available, student placement criteria, descriptions for courses offered, and any specific course requirements. Some classes may require nominal laboratory, project, or materials fees. Please note: the final course offerings for the following school year **are based on student enrollment and staffing availability**.

Parents and students should give special attention to the selection of courses during registration. **The master schedule of classes and the allocation of staff is based on students' initial registration. After the registration period, schedule changes will be made in exceptional cases only.** Requests for changes by a student or parent must be for educationally sound reasons and submitted in writing to the principal. A parent/counselor/team meeting will then be scheduled to discuss the request. **Course selections must be done with great care and preplanning.**

## Course Descriptions

### **\* Mathematics \***

#### **Grade 8 Math Course:**

The Grade 8 Math Course builds on the learning from both the Grade 6 Math and Grade 7 Math Courses. There are intentional connections between and within units in this course. This allows students to explore ideas informally and concretely in order to build toward a more formal and abstract understanding. The intent of this course, through the organization of content, carefully selected pedagogy, and inclusion of the Standards of Mathematical Practice in design, is that students will work collaboratively to deepen their understanding of concepts, practice procedural skill and fluency, and apply their understanding to a variety of contexts.

Students begin the Grade 8 Math Course with transformational geometry. They then apply the proportion relationship learning from grade 7 to study linear relationships in a variety of contexts and using a variety of representations. The first semester ends with students building on their prior work with linear equations and an introduction to linear systems. In the second semester, students are introduced to functions and then apply their understanding of linear relationships and functions to contexts involving data with variability. Work from grade 6 about exponents extends to include all integers and the properties of exponents. In Grade 8 Math, students encounter both scientific notation and irrational numbers for the first time. The year concludes with the study and application of the Pythagorean Theorem and a study of volume.

#### **Algebra 1 A/B (High School Credit Course):**

The Algebra 1 A/B Course is designed to explore, analyze, and model real-world phenomena through a mathematical lens. Exploration of linear, exponential, and quadratic functions forms the foundation of the course. Students develop conceptual understanding and fluency in solving equations, inequalities, and systems by explaining and validating their reasoning with increased precision. Students deepen their understanding of functions and their ability to represent, interpret, and communicate about them. Key characteristics and representations of functions—graphic, numeric, symbolic, and verbal—are analyzed and compared. Students use these representations to model relationships and constraints, but also reason with them abstractly. One- and two-variable data sets are interpreted using mathematical models. Gathering and displaying data, measuring data distribution, and interpreting statistical results encourages students to collaborate, communicate, and explore new tools and routines. They then take these insights to a unit on two-variable statistics, where they extend their prior knowledge of scatter plots and lines of best fit. Throughout the units of study, classroom activities provide students with opportunities to engage in aspects of mathematical modeling. Modeling prompts are used so that students experience and engage in the full modeling cycle.

#### **Honors Geometry (High School Credit Course):**

Honors Geometry formalizes and extends students' geometric experiences from the elementary and middle school grades. Students explore more complex geometric situations and deepen their understanding of geometric relationships, progressing toward formal mathematical arguments. Instruction at this level will focus on the understanding and application of congruence as a basis for developing formal proofs; the relationship among similarity, trigonometry, and triangles; the relationship

between two- and three-dimensional objects and their measurements; exploration of geometric descriptions and equations for conic sections; and application of geometric concepts in modeling situations.

Honors Geometry focuses on the Standards for Mathematical Practice to build a climate that engages students in the exploration of mathematics. The Standards of Mathematical Practice are habits of mind applied throughout the course so that students see mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

### **Math 180 Course:**

Math 180 is a comprehensive system of instruction, assessment, and professional development designed to help students who are more than 2 years below grade level prepare for algebra. The program directly addresses individual needs through adaptive and instructional software, high-interest materials, and direct instruction in mathematical calculation and application skills. Students rotate among a small group, teacher-directed lessons, a computer station for reinforcement and practice, and an independent brain arcade where students complete math problems at their instructional level. Built with the student in mind, the learning experience is a uniquely motivating and fun way to accelerate to grade-level ability.

## **\* English \***

### **Advanced English 8**

All students are enrolled in Advanced English, and teachers differentiate and scaffold to meet the needs of all students to ensure their success. This course integrates the five English/language arts processes (reading, writing, listening, speaking, and viewing) and the two contents (language and literature) in a thematic organization of six units. It builds on the students' experiences in English 7, involving greater rigor and challenge in the instructional approach to the study of English. Students in English 8 examine language and literature in the context of the challenges people face. Students read, analyze, and study different genres related to each of the themes and complete required common tasks. Core texts include multicultural, contemporary, and classic titles. The common tasks focus primarily on the writing process for three types of writing—argument, narrative, and informative/explanatory—and they include the use of information, word processing, and presentation technology to address a variety of language skills. Students have opportunities to present their work orally and using various technology tools. Instruction in reading and writing strategies, grammar, and vocabulary is embedded throughout every unit. All students develop portfolios and revisit their compositions as they work to strengthen their writing skills. English 8 prepares students—through activities integrated into each thematic unit—for county, state, and national assessments.

## **\* Literacy & Reading Intervention Courses \***

Students are recommended for a reading intervention course based on external and classroom assessment data as well as teacher recommendations.

### **Academic Literacy**

This course involves implementation of System 44, a researched based intervention program. Instruction methods are focused on improving decoding and fluency skills. The course will include daily rotations of small group instruction, System 44 software practice, and independent reading. The lessons are systematic and cumulative.

### **READ 180**

READ 180 is an intensive reading intervention program designed to meet the needs of students whose reading achievement is below proficient level. The program directly addresses individual needs through adaptive instructional software, high-interest reading materials, and direct instruction in reading and writing skills. Students rotate among a small-group teacher-directed lesson, a computer station for reinforcement and practice, and an independent reading center where students read books at their reading level. The program is designed to rapidly accelerate student achievement with the goal of bringing students to grade level.

### **College Ed**

College Ed is a transitional reading intervention program designed to meet the needs of students whose reading proficiency has been demonstrated 1-2 years below grade level. The curriculum uses grade-level Common Core standards and can be tailored to individual needs through instructional software, high-interest reading materials, and direct instruction in reading and writing skills. Students rotate among a small-group teacher-directed lesson, a computer station for reinforcement and practice, and an independent reading center where students explore texts from their core subjects. The program is designed to rapidly accelerate student achievement with the goal of bringing students to grade level in reading as well as provide direct support for literacy in the core contents and in preparation for college and career readiness.

## **\* English for Speakers of Other Languages (ESOL) \***

For the 2021-2022, there will be changes in Grades 6-12 to ensure that ESOL courses are aligned to grade level expectations for English learners at different levels of language proficiency. These changes are a result of new accountability measures and requirements from the Maryland State Department of Education. To prepare English learners for these new requirements, ESOL courses will now be aligned to a grade level English course in both middle and high school.

The goal of the English for Speakers of Other Languages (ESOL) program is to empower ESOL students to master academic English to thrive in school, college, careers, and as global citizens. Students who qualify and receive ESOL services will take quarterly District Assessments to gauge comprehension of the literacy curriculum, including skills in writing either an analysis or argument in response to one or more grade-level texts. Additionally, students will take ACCESS assessment (Assessing Comprehension and Communication in English State-to-State) which is the annual English language proficiency test that is aligned to the World Class Instructional Design and Assessment (WIDA) English language development standards.

| <b>ESOL Courses</b> |   |
|---------------------|---|
| ELP: Level 1        | WIDA Level 1 (Sheltered English - Double Period)            |
| ELP: Level 2        | WIDA Level 2 (Sheltered English - Double Period)            |
| ELP: Level 3        | WIDA Level 3 (ELD Sheltered English or Grade Level English) |
| ELP: Level 4        | WIDE Level 4 (ELD in Grade Level English)                   |

*\*ELD - English Language Development\**

**METS**

The Multidisciplinary Education, Training, and Support (METS) program of MCPS is designed to meet the linguistic and academic needs of English language learners who have had limited or no previous schooling or significant schooling gaps, due to interrupted or disrupted education. Students enrolled in the METS program receive instruction in developing English language proficiency and basic literacy and academic skills. Students also receive instruction and support to facilitate adjustment to both the academic and social school environment.

**\* Science \***

**Investigations in Science 8**

Investigations in Science 8 provides opportunities for students to actively engage in the science and engineering practices and apply crosscutting concepts to deepen their understanding of core ideas across science disciplines. The curriculum is problem/project-based; instruction is woven around a relevant problem/project that drives student learning. Students apply their understanding of science, technology, engineering, and mathematics (STEM) to propose solutions to problems. Instruction provides opportunities for hands-on explorations, productive discourse, and purposeful reading and writing.

Teachers will implement the curriculum in Grade 8 as follows:

- Unit 1: Forces, Motion, and Interactions
- Unit 2: Earth, The Solar System, and The Universe
- Unit 3: Weather and Climate
- Unit 4: Earth’s Materials and Systems

**\* Social Studies \***

**Advanced U.S. History: Grade 8**

This course enhances the four MCPS Grade 8 U.S. History units through the development of skills from high school Advanced Placement courses in history. In addition to the MCPS course of study, students deepen their understanding of key concepts and events through reading, writing, document analysis, and historical thinking. These skills will be applied in each unit and students will be expected to show progress in skill development and historical knowledge in exams and historical document-based projects.

Teachers will implement the curriculum in Grade 8 as follows:

- Democracy: Political System of the People 1763-1783
- Creating National Political System and Culture 1783-1815
- Geographic and Economic Changes Shape the Nation 1815-1850
- A Nation Divided and Rebuilt 1840-1877

## **\* Physical Education \***

The middle school physical education program focuses on health-related fitness, movement skills and concepts, and personal and social responsibility. Each physical education unit challenges students to better understand the development and implementation of long-term fitness and physical activity goals, the application of tactics and movement skills in physical activities and sport, and the relationship between teamwork and achievement. The learning tasks in physical education emphasize and teach problem-solving and decision-making skills. Students are challenged to utilize strategies that deepen understanding and promote self-efficacy in learning concepts of movement, fitness, and responsibility.

By the end of Grade 8, students should know and be able to do the following:

Health-Related Fitness:

- Apply exercise principles to the health-related fitness components to develop, analyze, and refine a personal fitness plan.
- Apply and analyze methods for measuring target heart rate.
- Distinguish between nutritional needs that maintain the average healthy body and those for athletic performance.

Movement Skills and Concepts:

- Apply and analyze concepts related to defense and offense in personal development and tactical games activities.
- Develop, perform, and analyze creative skill combinations.
- Create, analyze, and refine a personal movement (practice) plan based on a variety of feedback.

Personal and Social Responsibility:

- Resolve conflicts and make healthy decisions that promote a sense of community and respect for others in physical activity settings.
- Apply, analyze, and refine effective time-management strategies to improve movement skills and fitness levels.

## **\* Comprehensive Health Education \***

Comprehensive Health Education promotes positive health-related attitudes and behaviors that support self-reliance and self-regulation while developing health literacy and lifelong wellness. The health skills emphasized throughout the program include analyzing influences, accessing information, interpersonal communication, decision-making, goal-setting, self-management, and advocacy. This nine-week course



includes the following five units of instruction: alcohol, tobacco and other drugs; personal and consumer health; family life and human sexuality; safety and injury prevention; and nutrition and fitness.

Parents of Grade 8 students will receive information about the family life and human sexuality unit of instruction prior to the start of the classroom instruction. Information about the components of healthy relationships, human reproduction, sexual limits and responsible decision-making, contraception methods, gestations, prenatal care and parenting skills are included in Grade 8 health education. Parents will receive a permission form for their child to participate in the family life unit of instruction. If the permission slip is not returned, the student will receive instruction on family like concepts. Parents who object to the content of this instruction will check “No” on the parent permission form and the child will be excused from that unit. If excused, the child will complete an independent-study alternative unit of health education.

### **\* World Languages \***

The goal of the world languages program in Montgomery County Public Schools (MCPS) is to prepare students to be linguistically and culturally competent in languages other than English. The ability to communicate in a culturally appropriate manner with speakers of other languages is the key to success in the increasingly diverse global community of the 21st century. As students develop proficiency in world languages and an understanding of the underlying values and beliefs of other cultures, they gain the skills that are essential to meaningful communication. Students are encouraged to pursue World Language offerings in middle school. World languages courses must be taken in sequential order. **Students who are native speakers of French or Spanish, or students who have received comprehensive instruction in a language, may request a placement exam to bypass the initial level of a language course. If students are recommended for a Reading Intervention Course, they are not eligible to enroll in a world language for 8th grade.**

In order to receive credit for high school courses completed while in middle school, middle school students must meet the same requirements as high school students. Students will take an MCPS Integrated Performance Assessment (IPA) each quarter. Students begin to learn to communicate orally and in written form about daily life. Emphasis is on vocabulary development, simple grammatical structures, and the basic culture of the people.

## World Languages Course Offerings:

| <b>Course Title</b>             | <b>Course</b> |
|---------------------------------|---------------|
| French I                        | 1 A / 1 B     |
| French II                       | 2 A / 2 B     |
| French III (Honors)             | 3 A / 3 B     |
| Spanish I                       | 1 A / 1 B     |
| Spanish II                      | 2 A / 2 B     |
| Spanish III (Honors)            | 3 A / 3 B     |
| Spanish for Spanish Speakers I  | 1 A / 1 B     |
| Spanish for Spanish Speakers II | 2 A / 2 B     |

### **Level 1A/1B (Full Year Course)**

#### **Spanish or French**

This is a high school credit-bearing course. Students begin to learn to communicate orally and in writing in a culturally appropriate manner about topics related to daily life. They interpret basic information when listening and reading. Vocabulary and basic grammatical structures are taught within the context of these familiar topics. Culture is embedded throughout the course. Students who successfully complete both semesters of 1A/1B earn one foreign language credit toward graduation.

### **Level 2A/2B (Full Year Course)**

#### **Spanish or French**

This is a high school credit-bearing course. Students expand their ability to communicate orally and in writing in a culturally appropriate manner about topics related to daily life. They interpret information when listening and reading. Vocabulary and grammatical structures are taught within the context of these topics. Culture is embedded throughout the course. Students who successfully complete both semesters of 2A/2B earn one foreign language credit toward graduation.

### **Level 3A/B (Full Year Course)**

#### **Honors Spanish or Honors French**

This is a high school credit-bearing course. Students continue to expand their ability to communicate orally and in writing in a culturally appropriate manner about a variety of familiar topics. They interpret detailed information when listening and reading. Vocabulary and more complex grammatical structures are taught within the context of these topics. Culture is embedded throughout the course. Students who successfully complete both semesters of 3A/3B earn one foreign language credit toward graduation.

### **Spanish for Spanish Speakers 1 A/B and 2 A/B(Full Year Course)**

This is a high school credit-bearing course. The Spanish for Spanish Speakers course provides language instruction for students who have developed proficiency in Spanish either because it is their first language or it is spoken extensively at home. The course is designed to address the specific needs of heritage Spanish Speakers. This course utilizes a language arts approach comparable to that of English

courses offered to English-speaking students. The course integrates history, culture, language, and connections related to the Spanish-speaking world.

### **\* Fine Art Electives \***

*(Elective courses are a regular part of the students' schedule and meet for one period each day.)*

The fine arts are important to every child's development and play a vital role in providing the students in Montgomery County Public Schools with the well-rounded, world class education necessary for college and career readiness. The fine arts promote the core competencies – Academic Excellence, Creative Problem-solving, and Social Emotional Learning – identified by MCPS as essential to prepare students for success in the 21st century. Students can take a fine arts course every year. This allows students with access to advanced courses and multiple opportunities/pathways in the fine arts.

**Middle School Studio Art 2:** In MS Art Level 2, students will explore RELATIONSHIPS and the many ways this theme can be represented through visual art. Students will have the opportunity to engage in lessons where they will respond, connect, create and present meaningful artwork. Students will explore a variety of traditional student media and techniques including drawing, painting, printmaking, sculpture, ceramics, and mixed media to create artworks. Students will develop a fundamental understanding of ideation, media techniques, formal qualities, and compositional devices at an advanced curriculum level.

**Middle School Digital Art and Photography 2:** Students will create advanced artwork using a variety of studio and digital media. Students will gain a deeper understanding of how artists generate and conceptualize ideas, refine craftsmanship through practice and persistence, and intentionally arrange compositional elements to effectively communicate meaning.

**Middle School Studio Art 3:** In MS Art Level 3, students will explore INFLUENCE and the many ways this theme can be represented through visual art. The prerequisite for this course is MS Art 1 OR MS Art 2. Students will have the opportunity to refine their skills and develop their personal artistic style at an advanced curriculum level. Students will refine skills and master techniques in specific art media and creative processes including responding, connecting, creating and presenting meaningful artwork. Students will explore a variety of traditional student media and techniques including advanced drawing, acrylic canvas painting, incised printmaking, sculpture, ceramics, and mixed media to create artworks. Students will develop a fundamental understanding of ideation, media techniques, formal qualities, and compositional devices at an advanced curriculum level.

**Middle School Digital Art and Photography 3:** Students will refine skills and utilize advanced vector and raster-based software techniques to create works of digital art and design. The prerequisite for this course is MS Digital Art and Photography 1 OR 2.

### **Middle School Beginning Band or Beginning Strings (Orchestra) (Both Full Year)**

This course is for students with 0-2 years instrumental music experience. Students prepare for participation in performing ensembles and develop technical skills necessary to perform Grade 1 Level music, a performance level established by the National Association for Music Education and not a

reference to first grade. Basic instrumental skills are developed by performing a variety of music. Students are taught the elements of musical form, terms and symbols, tone production, instrument care and maintenance, and the importance of consistent practice habits. Cultural context of the music and its historical significance as they relate to performance is studied. Students will perform advanced level music publicly and participation in concerts is mandatory.

### **Middle School Band I- Intermediate Band (Full Year)**

This course is for students studying a band instrument at an intermediate level (minimum of 2 years of experience) and is a continuation from our beginning band program. Students have further opportunities to develop technical proficiency and to improve rehearsal techniques. Students will also acquire a wider vocabulary of musical terms and band literature. Additional experience may be offered in jazz ensemble and/or solo and ensemble performances. Students will perform MBDA Grade I-II music. Participation in concerts is mandatory.

### **Middle School Band II (Advanced Band) or Orchestra II (Advanced Orchestra) (Both Full Year)**

Students develop and refine their technical skills in order to perform music at the Grade 2 to Grade 3 Level of difficulty. Emphasis is placed on developing formal rehearsal decorum, following a conductor and developing pitch and rhythmic security in preparation for performing an independent part in the traditional band or orchestra ensemble. Students learn the social, cultural, and intellectual influences reflected in the musical works they are studying and discuss performance styles and musical forms of corresponding historical periods. The study of music theory includes performance and recognition of major scales, diatonic and chromatic intervals, and simple melodic dictation. The critical listening skills that are developed as a result of preparation for instrumental performance are used to help the student formulate criteria for effectively evaluating his/her own performance as well as the performance of others. Students will perform beginning level music publicly and participation in concerts is mandatory.

### **MS Chorus 1 (Full Year)**

Chorus is offered to all students who want to sing and develop individual and ensemble vocal skills. Students will create, perform, and respond to music in a variety of styles/genres. Students will continue to develop the fundamentals of proper vocal technique and choral singing in relation to posture, breath control, tone, intonation, diction, blending, singing in harmony, music literacy, and sight-singing. Students will primarily sing state level 2 music. There are two school concerts with additional opportunities to participate in district concerts. All students are expected to participate in all performances.

### **MS Chorus 2 (Full Year)**

Students will create, perform, and respond to music in a variety of styles/genres. Students will continue to develop the fundamentals of proper vocal technique and choral singing in relation to posture, breath control, tone, intonation, diction, blending, singing in harmony, music literacy, and sight-singing. Student will primarily sing state level 2-3 music. There are three school concerts as well as many opportunities to participate in other festivals (Music in the Parks at Kings Dominion or Hershey Park next June) and performances in the district. Students are expected to participate in all performances. An audition and/or a prerequisite of MS Chorus 1 is required.

### **General Music (Semester Course)**

In this course, students will have the opportunity to learn about the history of popular music from around the world and receive an introduction to the basics of music technology. This class is a great opportunity for those who want to learn more about music without having to perform in an ensemble.

### **Music Technology (Semester Course)**

Music Technology is a course that explores various technical aspects to the creation of music. Students will explore basic composition and music theory and learn about the history and techniques around podcasting, voice-over techniques, and looping and mixing music. They will have the opportunity to create music to share with friends and family. This course is open to all 6th, 7th, and 8th graders and is a fantastic option for students who enjoy music, but may not wish to perform live.

### **Middle School Theatre 1 (Semester)**

Students with no previous theatre experience will explore how the theater is a space that both creates and challenges community. Theatre artists create an ensemble amongst themselves which functions as a safe space for risk-taking and creating. A sustained investigation of community in this intermediate level course engages students to study a variety of dramatic works, participate in the creation and enhancement of ensemble, and question the role of theatre within their community.

### **Middle School Theatre 2 (Semester)**

Students who have taken the first course in the MS Theatre sequence continue to build their skills by exploring a multitude of identities on and off the stage. Personal, familial, and cultural identities can provide a launchpad for exploring self, character, conflict, and personal approaches to theatre. Identity is commonly at the root of nearly all dramatic works and is a defining element in a theatre artists' approach to performance, design, production, and critique. A sustained focus on Identity enables students to approach a variety of practices, games, dramatic works, traditions, and resources through a common lens, one which reinforces theatre's eternal focus on "the human experience."

## **\* Science/Technology/Engineering/Mathematics (STEM) Electives \***

*(Elective courses are a regular part of the students' schedule and meet for one period each day.)*

### **Principles of Information Technology, Cyber Security & Engineering (Semester)**

Students will receive instruction in 3 of the 4 units below:

- *Cyber SAFE*
- *Computer Literacy—Hardware and Software*
- *Cyber Safety and Software Applications*
- *Invention & Innovations*
- *Development and Use of Technology*
- *Engineering Design Process*

### **Computer Science Discoveries 1 & 2 (Full Year)**

Computer Science Discoveries (CS Discoveries) is an introductory Code.org® computer science course that engages and empowers all students, regardless of background or prior experience, to solve problems, communicate, create projects and artifacts and have fun using computer science. Students are introduced to coding languages appropriate for beginners as well as more complex projects for students with more experience. Students will progress from blocks to typed coding and learn JavaScript. Students may take one semester Computer Science Discoveries 1 and one semester of Computer Science

Discoveries 2. Students successful in both semesters of this course will be prepared for AP Computer Science Principles high school course.

### **Computer Science Discoveries 1 (Semester)**

Students will learn the problem solving process of defining a problem, finding a solution, trying out their solution and reflecting on the results. This process will be applied to a variety of problems. Students will also create a website using HTML and CSS, using Code.org Web lab. Students will learn to design and Build interactive games in JavaScript using Game Lab.

### **Computer Science Discoveries 2 (Semester)**

Students will design and create a prototype of an App using Code.org App lab. Students will learn how to collect, analyze, visualize, and make automated decisions using data They will explore the relationship between hardware and software and learn programming utilizing sound, light, temperature and motion sensors on Adafruit's circuit playground. Prerequisite for this course is Computer Science Discoveries 1.

### **Computer Aided Drafting/Design-Applied Robotic Engineering (Full Year)**

In this hands-on course, students experience real world problem solving in a laboratory setting. Students will design, build, and program robots to solve engineering challenges. Mathematics, science and technology concepts will be applied throughout the course to support the engineering processes involved in robotic development. Units include: Magnetic Levitation Trains and Sea Perch Underwater Robots.

### **Foundations of Computer Science A/B - High School Technology credit (Full Year)**

This course provides an engaging introduction to computing concepts through a nationally developed curriculum. The course focuses on the conceptual ideas of computing so that students understand why tools and languages are used to solve problems through a study of human computer interaction, problem solving, web design, programming using Scratch, data analysis, and Lego robotics.

### **Introduction to Engineering Design A/B - High School Technology credit (Full Year)**

This high school course for Grade 8, develops students' problem-solving skills, with emphasis on visualization and communication skills, using a computer and a 3-D solid modeling software. This course emphasizes the development of a design using computer software to produce, analyze, and evaluate models of projects and solutions. Students will study the design concepts of form and function and then use state-of-the-art technology to translate conceptual design into reproducible products.

## **\* General Electives \***

### **Forensic Science (Living with Technology) (Semester)**

This Forensic Science course engages the students in experimentation, personal observation and hands on learning. This course also provides students with experiences, and information that will broaden their understanding of the field of Forensic Science and crime scene investigations. If you enjoy solving a great mystery, then you have found the right place! By the end of the semester we will have formed our very own Wood CSI team.

### **Student Court Grade (Full Year)**

This course provides a comprehensive study of the United States judicial system by focusing on the rights of citizens, criminal court procedures, types of crimes and sentencing, juvenile court, and landmark cases. Students will access the curriculum through a variety of instructional methods including role playing, small group exercises, and mock trials. These activities will enable students to improve their writing and verbal communication skills, lead to a deeper understanding of the United States court system, as well as expose them to a variety of career opportunities associated with law. Students who enroll in Student Court attend a private guided tour of the Montgomery County District court. Additionally, Student Court participants are given the opportunity to travel to North Carolina to compete in a mock trial competition against schools from other states.

### **Digital Literacy 3 (Innovative Minds 1) (Semester)**

This course focuses on increasing critical and creative thinking through reading, writing, speaking, listening, and viewing through an integrated approach. Students will be introduced to a variety of social issues from various perspectives, examine the history of social movements and the impact on social and economic justice, explore their identity, and understand the ways in which communities can respond to these complex issues. Students will explore social justice terminology in order to better advocate for a socially just society. They will have multiple opportunities to participate in book clubs, where they will interact with classmates to analyze social justice texts. Students will participate in sustained inquiry, analysis, and evaluation of text through reading complex informational, expository, and argumentative texts in a technology-rich medium. Students will use research skills to investigate a contemporary social issue using real-time global texts and then create solutions to address the issue at the individual and/or systemic level.

## **\* Additional Support Courses \***

**Related Studies** – *Placement is determined by individual needs in the areas of attendance, academic eligibility and behavior support in consultation with the student's teachers, counselor or administrator.*

The vision of Related Studies is to provide students with the skills necessary to achieve excellence in all areas of their personal and educational development, including attendance, behavior and academics. Students develop short and long term goals and learn to recognize the connection between their efforts in the present and their opportunities in the future.

**Resource** - *Placement is determined by individual academic needs in consultation with the student's grade level teachers, counselor or IEP team as appropriate.*

Resource offers students, who have been identified with academic needs, the daily opportunity to work on self-advocacy, organization, test taking strategies, re-teaching of content, reading and writing skills, basic math skills, as well as homework support.

## **\* Special Education \***

**Placement is determined by the Individualized Education Program (IEP) team.**

The Special Education Department services students who are identified with an educationally related disability. Services are provided based on the IEP for each student. The main focus is to use the curriculum for each grade and subject to address goals and objectives. Classes are offered as a continuum of services including self-contained and inclusion classes. A variety of strategies and accommodations are incorporated into the program. Programs offered at Wood include Autism, Deaf and Hard of Hearing, Learning and Academic Disabilities and Resource.

### **Learning and Academic Disabilities Program (LAD)**

The Learning and Academic Disabilities (LAD) program serves students who qualify for Special Education services for a variety of reasons including, Specific Learning Disabilities, Speech Language Impairments, or Other Health Impairments. Students in the program receive support in the setting that best meets their academic needs, including self-contained and/or inclusion classes. Special Education staff is trained in strategy based teaching and focus on incorporating the strategies as the students access the general education curriculum.

### **Autism**

The Autism Department focuses on the following goals:

- To provide comprehensive special education instruction to students with Autism Spectrum Disorders.
- To provide a highly structured individualized program that is based on a behavioral model of skill instruction and behavior change.
- To provide structured opportunities to interact with non-disabled peers.
- To meet the needs of students with Autism Spectrum Disorders whose educational needs cannot be met in a less restrictive special education setting with a more varied peer group.

### **Deaf and Hard of Hearing (DHOH)**

Earle B. Wood Middle School offers the middle school component of Montgomery County's programs for students who are Deaf and Hard of Hearing. Students are offered three modes of communication: Total Communication (Sign Language), Cued Speech, and Oral/Auditory. Total communication Interpreters and Cued Speech Translators are provided for students in classrooms and for after school activities. The program also provides communication and speech services.



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