Argyle Magnet Middle School
for Digital Design and Development
INVENT THE FUTURE WITH US!

2400 Bel Pre Road
Silver Spring MD, 20906
Tele: 301-460-2400

Grade 7 and 8 Course Bulletin

Mr. Robert W. Dodd, Principal
Mr. Peter Daddone, Magnet Coordinator
Mr. Geoffrey Edgar, Assistant Principal
Mr. Roger Prince, Assistant Principal
Dear Argyle Parent/Guardians and Students,

Welcome to another preparation for next school year at Argyle Magnet Middle School. This course booklet provides an overview of the instructional program offered at Argyle and includes a general description of the courses, elective offerings, and special programs available to our students.

As a member of the Middle School Magnet Consortium (MSMC), one of our primary goals is to increase student capacity for rigorous instruction in middle school and for advanced study in high school. Students at MSMC schools are offered a range of courses, including high school credit courses. In addition, teachers have a unique opportunity for professional development and collaborative planning to help students reach their highest potential. Our staff is committed to the exceptional achievement for every child in a supportive and safe learning environment.

Argyle Magnet Middle School for Digital Design and Development offers students in grades 6, 7, and 8 a challenging and rigorous academic program which allows all students access and opportunity to take computer science focused elective courses. With the whole school magnet model, all students participate in a program that provides a specific emphasis on digital design and development. In addition to a unique and specialized curriculum, 21st century technology tools are integrated into all curricular areas allowing students and staff the opportunity to enhance the educational experience and support student achievement.

Families are encouraged to use this booklet to facilitate decision making and long range planning for the most challenging and rigorous courses possible for a successful middle school experience.

Sincerely,

Robert W. Dodd
Principal
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>GENERAL INFORMATION</td>
<td>4</td>
</tr>
<tr>
<td>MAGNET FOCUS: DIGITAL DESIGN AND DEVELOPMENT</td>
<td>4</td>
</tr>
<tr>
<td>REGISTRATION PROCEDURES</td>
<td>4</td>
</tr>
<tr>
<td>SCHEDULING PROCESS</td>
<td>4</td>
</tr>
<tr>
<td>TEAM ORGANIZATION</td>
<td>4</td>
</tr>
<tr>
<td>SCHEDULE</td>
<td>4</td>
</tr>
<tr>
<td>HEALTH SERVICES</td>
<td>5</td>
</tr>
<tr>
<td>AGENDA BOOK</td>
<td>5</td>
</tr>
<tr>
<td>LOCKERS</td>
<td>5</td>
</tr>
<tr>
<td>SCHOOL COUNSELING SERVICES</td>
<td>5</td>
</tr>
<tr>
<td>SPECIAL EDUCATION SERVICES</td>
<td>5</td>
</tr>
<tr>
<td>ENGLISH FOR SPEAKERS OF OTHER LANGUAGES (ESOL)</td>
<td>6</td>
</tr>
<tr>
<td>HIGH SCHOOL CREDIT COURSES FOR MIDDLE SCHOOL</td>
<td>6</td>
</tr>
<tr>
<td>STUDENT SERVICE LEARNING (SSL)</td>
<td>6</td>
</tr>
<tr>
<td>AFTERSCHOOL ACTIVITIES AND CLUBS</td>
<td>6</td>
</tr>
<tr>
<td>INTRAMURAL PROGRAM</td>
<td>7</td>
</tr>
<tr>
<td>INTERSCHOLASTIC ATHLETIC PROGRAM</td>
<td>7</td>
</tr>
<tr>
<td>MUSIC PROGRAM</td>
<td>7</td>
</tr>
<tr>
<td>GRADE 7 COURSE OPTIONS</td>
<td>8</td>
</tr>
<tr>
<td>GRADE 8 COURSE OPTIONS</td>
<td>9</td>
</tr>
<tr>
<td>ENGLISH AND ENGLISH FOR SPEAKERS OF OTHER LANGUAGES</td>
<td>10-11</td>
</tr>
<tr>
<td>READING</td>
<td>12</td>
</tr>
<tr>
<td>WORLD STUDIES</td>
<td>13</td>
</tr>
<tr>
<td>MATHEMATICS</td>
<td>13-14</td>
</tr>
<tr>
<td>SCIENCE</td>
<td>15</td>
</tr>
<tr>
<td>PHYSICAL EDUCATION / HEALTH EDUCATION</td>
<td>15-17</td>
</tr>
<tr>
<td>WORLD LANGUAGES</td>
<td>17</td>
</tr>
<tr>
<td>INSTRUMENTAL MUSIC</td>
<td>17 - 19</td>
</tr>
<tr>
<td>MAGNET COURSES</td>
<td>20 - 22</td>
</tr>
<tr>
<td>THREE-YEAR COURSE GRID</td>
<td>23</td>
</tr>
</tbody>
</table>
GENERAL INFORMATION

MAGNET FOCUS: DIGITAL DESIGN AND DEVELOPMENT
Introduced in 2005, the Argyle Magnet program offers a rigorous academic program which allows all students access and opportunity to take computer science focused elective courses. The program is designed to develop advanced skills in the areas of gaming and simulation (programming), website design, multimedia production, or digital art. Many advanced technology and art courses allow those that successfully complete the course to earn high school elective credit. In addition to a unique and specialized curriculum, 21st century technology tools are integrated into all curricular areas allowing students and staff the opportunity to enhance the educational experience and support student achievement.

REGISTRATION PROCEDURES
Students and parents/guardians are encouraged to read this document thoroughly before making course selections. Students and parents/guardians should work together to make course selections that best suit the interests and abilities of the student. Use this program book as a guide to courses, programs, services and activities available at Argyle.

Along with this booklet, a registration card has been provided. The sticker on the registration card indicates those courses that have been recommended by the current grade level teacher(s). Parents/guardians may use the registration card to request a course other than the one that has been recommended. Should your registration card not include a sticker, please contact your counselor for the recommended information. Final course enrollment for each student is a collaborative decision between the parent/guardian and the middle school.

SCHEDULING PROCESS
Final course offerings are determined by course enrollment, staffing, available resources, and final budget approval. The Argyle staff will work diligently to create a schedule for each student that meets his/her academic needs and interest.

TEAM ORGANIZATION
Argyle is organized using a grade level team structure. Grade level teacher teams meet regularly to plan for instruction, make interdisciplinary connections, and build consistency in the program. The team approach allows teachers to work with students to build a strong sense of community and to foster long-term student-teacher relationships.

SCHEDULE
All Argyle students enroll in the following required middle school courses: English, mathematics, science, social studies, and physical education/health. Reading is required based on student academic needs and proficiency levels. All grade 6 students are required to take the magnet focus course, Information and Communications Technology 6. Beyond these required core courses, students will have the opportunity to take magnet focused courses, art, world languages, and music. This Course Bulletin will provide an overview of the general magnet course offerings by rotating
each quarter through a different course. Argyle is excited to offer a number of courses that upon successful completion afford the student an opportunity to receive high school elective credit.

**HEALTH SERVICES**

School Health Services nurses (registered nurses) and school health room aides (certified nursing assistants) provide school health services to students during school hours. Services include assessing health needs of students, providing first aid and emergency care to sick and injured students, monitoring immunization compliance, administering medications and treatments to students who have written physician’s orders and parental authorization, maintaining student health records, providing crisis intervention, health counseling, health education-promotion, nurse case-management and referrals.

**AGENDA BOOK**

At Argyle, all students will receive an agenda book. Students are required to carry their agenda book to each class to record assignments, projects, and other key information related to their coursework. Lost agenda books must be replaced at a cost of $5.00 per book.

**LOCKERS**

Students will be assigned a hall locker and issued a school lock for both hall and physical education lockers. Students must use the school issued lock. Personal locks are not permitted. Students are not allowed to share lockers. Locker and lock combinations should not be shared with anyone. Only textbooks, school supplies, lunch, and clothes should be kept in their lockers. Lockers should be kept clean and clear of unnecessary items. Lost locks must be replaced at a cost of $5.00 per lock.

**SCHOOL COUNSELING SERVICES**

While at Argyle, students will be assigned a school counselor who will assist them in three major areas: academic achievement, career and educational planning and personal and social development. The school counselor may help individual students or small groups in a variety of settings. School counselors are assigned to students by grade level and remain with those students throughout their experience at Argyle so that a positive and lasting relationship of support is maintained.

**SPECIAL EDUCATION SERVICES**

Students with disabilities have varied Individualized Education Plans (IEP) that provide specialized instruction to address their academic needs. General and special education teachers collaborate to ensure students have meaningful opportunities to access the general curriculum. Instruction is designed to incorporate strategies that will enable students to make progress on their IEP goals and manage the rigor of content across all subject areas. Students with specialized reading needs as designated in their IEP may receive services through a reading intervention program. This program implements specific reading intervention strategies in reading and writing based on student need. We also have co-taught and supported classes in all academic areas.
ENGLISH FOR SPEAKERS OF OTHER LANGUAGES (ESOL)
The English for Speakers of Other Languages program enrolls linguistically and culturally diverse secondary students who require intensive English language instruction and orientation to a new cultural and academic environment. Students in MCPS are assessed on a state-mandated test of language proficiency and placed in an appropriate level of ESOL instruction, levels one through three. The composition of the student population in each level is usually multi-grade and heterogeneous. ESOL support provides instruction in the acquisition of the English language with specific emphasis on the listening, speaking, reading, writing and viewing skills that are prerequisite for success in a rigorous academic environment.

HIGH SCHOOL CREDIT COURSES FOR MIDDLE SCHOOL
High school credit is awarded to students who complete yearlong high school courses while in middle school after the student has passed both semesters of the course and passed the semester B high school final examination. The credit and grade are recorded on a student’s transcript during the first year of high school. Grade 6-8 students may retake a high school course in middle school and receive the higher earned grade.

STUDENT SERVICE LEARNING (SSL)
Student service learning helps students learn and develop through active participation in thoughtful, organized service that meets a recognized community need. Students are required to complete 75 SSL hours to earn a Maryland high school diploma. Students may begin earning SSL hours during the summer following the completion of grade five and continue through grade 12. During middle school, students can earn SSL hours in grade 6 science, grade 7 English, and grade 8 world studies. Full participation in these activities and successful completion of the course are required for students to obtain the SSL hours. Students may earn additional hours by participating in any or all of the following types of activities: direct action, indirect action, or advocacy. MCPS has established the following deadlines for submission of SSL documentation: hours completed during the summer must be submitted on or before the first Friday before September 30, hours completed during semester 1 and 2 must be submitted no later than the Friday before semester exams begin.

AFTER-SCHOOL ACTIVITIES AND CLUBS
Argyle offers a variety of after-school clubs and activities for students. Participation in the clubs and activities provides students the opportunity to network with peers and adults, extend their learning, and have fun. Examples of clubs that have been offered at Argyle include: Web Design, Jazz Club, GRRL Tech, Drama Club, SGA, Chess Club, Yearbook, Young Writers Academy, Environmental Club, Reading Support, and Math Support. A comprehensive list of current club and activity options will be distributed to the students at the start of the school year. Payment of the MCPS extra-curricular fee is required in order to participate in all MCPS extracurricular activities. In addition, Argyle offers the Montgomery County Recreation Departments Excel Beyond the Bell which extends our after-school program until 5:00 PM. The recreation department has partnered with multiple county agencies to bring a variety of programs to our students including but not
limited to Ultimate Frisbee, R. C. Cars, Clancy Works, Goal Setting Girls, Horizons Outdoor Adventures, AALEAD, Cartooning, etc. based on student interest. These activities do not require payment of the MCPS extra-curricular fee.

**INTRAMURAL PROGRAM**
The intramural program is an extension of the physical education program that takes place before and after school on most Tuesdays, Wednesdays, and Thursdays. All academically eligible students at Argyle may participate in the intramural program. A variety of intramural activities will be offered throughout the year. Payment of the MCPS extra-curricular fee is required in order to participate.

**INTERSCHOLASTIC ATHLETIC PROGRAM**
The athletic program is an extension of the physical education and intramural programs that offers a higher level of competition. The primary purpose of the athletic program is to provide an opportunity for advanced skill development for students with an interest and talent in athletics. The athletic program takes place most Tuesday, Wednesday, and Thursday afternoons. Argyle students compete against other MCPS middle school teams in four sports throughout the year: softball and cross country in the fall, basketball in the winter, and soccer in the spring. All academically eligible students in Grades 7 and 8 may participate in the interscholastic athletic program. Payment of the MCPS extra-curricular fee and a current health inventory are required in order to participate.

**MUSIC PROGRAM**
Argyle offers a comprehensive instrumental music program that incorporates technology. Students are provided opportunities to improve their musical skill through in-class practice and various performances throughout the year. Full year courses are offered at each grade level.
# GRADE 7 COURSE OPTIONS

## REQUIRED COURSES

<table>
<thead>
<tr>
<th>ENGLISH</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGLISH</td>
<td>English 7</td>
<td>Advanced English 7</td>
</tr>
<tr>
<td></td>
<td>ESOL 1, 2, 3, 4 or 5</td>
<td></td>
</tr>
<tr>
<td>SCIENCE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCIENCE</td>
<td>Investigations in Science 7</td>
<td></td>
</tr>
<tr>
<td>WORLD STUDIES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WORLD STUDIES</td>
<td>Advanced World Studies 7</td>
<td></td>
</tr>
<tr>
<td>MATH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH</td>
<td>Math 7</td>
<td>Investigations in Mathematics</td>
</tr>
<tr>
<td></td>
<td>Algebra 1 A/B&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Honors Geometry A/B&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>PHYSICAL EDUCATION/HEALTH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHYSICAL EDUCATION/HEALTH</td>
<td>PE/Health 7</td>
<td></td>
</tr>
</tbody>
</table>

## ELECTIVE COURSES

| TECHNOLOGY |  |  |
| TECHNOLOGY | Computer Art |  |
| TECHNOLOGY | Web Fundamentals |  |
| TECHNOLOGY | Programming Fundamentals (Gaming + Robotics) |  |
| TECHNOLOGY | Lights, Camera, Literacy! |  |
| TECHNOLOGY | Designing Technology Solutions A/B (HS credit) |  |
| TECHNOLOGY | Discovering Programming A/B (HS credit) |  |
| TECHNOLOGY | Innovative Minds |  |
| MUSIC |  |  |
| MUSIC | Beginning Band |  |
| MUSIC | Intermediate Band |  |
| MUSIC | Advanced Band |  |
| MUSIC | Beginning Orchestra |  |
| MUSIC | Intermediate Orchestra |  |
| MUSIC | Advance Orchestra |  |
| MUSIC | Guitar |  |
| MUSIC | Percussion |  |
| WORLD LANGUAGES |  |  |
| WORLD LANGUAGES | Spanish 1A<sup>1</sup> or Spanish 1B<sup>1</sup> |  |
| WORLD LANGUAGES | Español para hispanohablantes 1A/B (Estudiante habla español en casa and requires placement test for entry) |  |
| READING |  |  |
| READING | Reading 7 |  |
| READING | Read 180 |  |

<sup>1</sup> High school elective credit bearing course
# GRADE 8 COURSE OPTIONS

<table>
<thead>
<tr>
<th>REQUIRED COURSES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGLISH</td>
<td>English 8</td>
</tr>
<tr>
<td></td>
<td>Advanced English 8</td>
</tr>
<tr>
<td></td>
<td>ESOL 1, 2, 3, 4, and 5</td>
</tr>
<tr>
<td>SCIENCE</td>
<td>Earth Science Systems A/B</td>
</tr>
<tr>
<td>WORLD STUDIES</td>
<td>Advanced U.S. History 8</td>
</tr>
<tr>
<td>MATH</td>
<td>Investigations in Mathematics</td>
</tr>
<tr>
<td></td>
<td>Algebra 1 A/B¹</td>
</tr>
<tr>
<td></td>
<td>Honors Geometry A/B¹</td>
</tr>
<tr>
<td></td>
<td>Algebra 2 A/B¹</td>
</tr>
<tr>
<td>PHYSICAL EDUCATION/HEALTH</td>
<td>PE/Health 8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ELECTIVE COURSES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TECHNOLOGY</td>
<td>Designing Technology Solutions A/B¹</td>
</tr>
<tr>
<td></td>
<td>Computer Art 7/8</td>
</tr>
<tr>
<td></td>
<td>Art 8 A/B¹</td>
</tr>
<tr>
<td></td>
<td>Web Fundamentals</td>
</tr>
<tr>
<td></td>
<td>Website Development A/B¹</td>
</tr>
<tr>
<td></td>
<td>Programming Fundamentals (Gaming + Robotics)</td>
</tr>
<tr>
<td></td>
<td>Discovering Programming Concepts A/B¹</td>
</tr>
<tr>
<td></td>
<td>Innovative Minds 2</td>
</tr>
<tr>
<td>MUSIC</td>
<td>Beginning Band</td>
</tr>
<tr>
<td></td>
<td>Intermediate Band</td>
</tr>
<tr>
<td></td>
<td>Advanced Band</td>
</tr>
<tr>
<td></td>
<td>Beginning Orchestra</td>
</tr>
<tr>
<td></td>
<td>Intermediate Orchestra</td>
</tr>
<tr>
<td></td>
<td>Advanced Orchestra</td>
</tr>
<tr>
<td></td>
<td>Guitar</td>
</tr>
<tr>
<td></td>
<td>Percussion</td>
</tr>
<tr>
<td>WORLD LANGUAGES</td>
<td>Spanish 3A¹</td>
</tr>
<tr>
<td></td>
<td>Spanish 3B¹</td>
</tr>
<tr>
<td></td>
<td>Español para hispanohablantes 1A/B (Estudiante habla español en casa and requires placement test for entry)</td>
</tr>
<tr>
<td>READING</td>
<td>Reading 8</td>
</tr>
<tr>
<td></td>
<td>Read 180</td>
</tr>
</tbody>
</table>

¹ High school elective credit bearing course
ENGLISH 7
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 four units. Rigor and challenge are essential components of the instructional approach to English 7. Instruction in reading and writing strategies, grammar, and vocabulary are embedded in every unit. The thematic units include: Identity, A Sense of Place, Voices from the Past, and Imagination. Students read, analyze, and study different genres related to each of the themes and complete required common tasks. Students have opportunities to present their work orally and through the medium of technology. All students develop portfolios and revisit their compositions as they work to strengthen their writing skills.

ADVANCED ENGLISH 7
This course is designed for able and motivated students with a lively interest in the power and versatility of language. In preparation for Advanced English 8 and advanced high school English courses, students read challenging texts written in various time periods and rhetorical contexts. Students develop their ability to express ideas with clarity and precision by writing increasingly complex compositions for a variety of purposes, including literary analysis, persuasion, and research.

ENGLISH 8
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 four units. Rigor and challenge are essential components of the instructional approach to English 8. Instruction in reading and writing strategies, grammar, and vocabulary are embedded in every unit. The thematic units include: Journeys, Community, Responsibility, and Discoveries. Students read, analyze, and study different genres related to each of the themes and complete required common tasks. Students have opportunities to present their work orally and through the medium of technology. All students develop portfolios and revisit their compositions as they work to strengthen their writing skills.

ADVANCED ENGLISH 8
This course is designed for highly motivated students with a lively interest in the power and versatility of language. In preparation for advanced high school English courses, students read challenging texts written in various time periods and rhetorical contexts, making interdisciplinary connections with historical events and concepts developed in their ability to express ideas with clarity and precision by writing increasingly complex compositions for a variety of purposes, including literary analysis, persuasion, and research. Beginning in the 2013-14 school year,
students have the option to take Advanced English 8. Unlike previous years, the option to earn high school elective credit for successful completion of the course will not continue.

**ENGLISH FOR SPEAKERS OF OTHER LANGUAGES (ESOL)**

ESOL students receive daily English language instruction from an ESOL teacher. The amount of daily ESOL instruction varies according to the level of English language proficiency, with those at the lowest level of English proficiency receiving the most intensive instruction. Beginning and low intermediate ESOL students receive two ESOL classes daily. Advanced students receive one ESOL class daily. The ESOL student population in each level is multi-grade and heterogeneous. ESOL classes provide structured instruction in the acquisition of the English language with specific emphasis on the listening, speaking, reading, and writing skills that are prerequisites for success in a rigorous, academic environment.
READING 7/8
Reading 7/8 extends the reading strategies framed in previous reading courses. This curriculum is designed primarily for readers who have a foundation in decoding skills but experience difficulty comprehending grade-level material. The goal of the course is to build reading comprehension of expository texts that students will encounter in secondary content classes, including periodicals, trade books, textbooks, and reference materials. Students learn research-based reading strategies and apply them to the content texts of science, social studies, English, and mathematics. During the year, students work with increasingly difficult materials as they become more independent and efficient readers. *(Teacher recommendation required.)*

READ 180
READ 180 is a comprehensive reading intervention program designed to meet the needs of students whose reading achievement is below the proficient level. These students require additional support to address the gaps in their foundational reading skills. READ 180 is built to address these gaps by directly addressing individual needs through instructional software, high-interest literature, and direct instruction in reading skills. *(Teacher recommendation required.)*
ADVANCED WORLD STUDIES 7
This course extends the content and concepts contained in the four units of World Studies 6. Through the study of world civilizations and global interactions from 1000 CE to 1450 CE, students learn about political, economic, and social systems today. Analysis of primary source texts and visuals are a central method for learning about the past and the challenges of historical interpretation.

ADVANCED U.S. HISTORY 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 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.

MATH 7
Math 7 extends students' understanding of numbers and computation to include integers and proportional reasoning. All concepts and skills are presented in the context of problem solving that requires the use of reasoning and communication. Areas of focus include functional relationships; arithmetic and geometric sequences; and data analysis and representation. This course is for students who have fully grasped the Math 6 indicators. Students who successfully complete Math 7 will take Investigations in Mathematics or Algebra 1 the following year.
INVESTIGATIONS IN MATHEMATICS
This course provides rigorous study for students who have demonstrated proficiency in the content of Math 7 in Grades 5, 6, or 7. The goal of this course is to ensure readiness for algebra and beyond. IM addresses all of the content of Algebra Prep at a deeper and more enriched level. Students extend their understanding of numbers to include rational and irrational numbers in the real number system and further develop computational fluency of real numbers. Areas of focus include multiple representations of linear function, data analysis and representation, probability experiments and simulations, and geometric properties and relationships between two and three dimensional figures. IM also previews concepts that are assessed on the Algebra/Data Analysis High School Assessment. The course includes additional concepts, such as set theory and modular arithmetic, which further develop students’ abstract thinking. Students successful in this course will take Algebra 1 the following year.

ALGEBRA 1 (1.0 high school credit course)
Algebra 1 is a high school course organized into two semesters. The course leads students to examine the basic structure of real numbers, algebraic expressions, data analysis, probability, and the elementary properties of functions. Areas of focus include properties and applications of linear, quadratic, and exponential functions. Mathematical modeling of real-life problems and problem solving are major themes of the course. A graphing calculator is used throughout this course.

HONORS GEOMETRY (1.0 high school credit course)
Honors Geometry is a high school course organized into two semesters. Students examine geometry as a mathematical system through the deductive development of relationships in the plane and space that has been developed intuitively in previous years. Areas of focus include congruent segments and angles, circle chords, secants and tangent segments, geometric proofs, logic, congruent and similar triangles, transformations, the Pythagorean Theorem, geometric constructions, coordinate geometry, and surface area and volume of solids. A graphing calculator is used throughout this course. Prerequisite: Successful completion of Algebra 1.

HONORS ALGEBRA 2 (1.0 high school credit course)
Algebra 2 is the study of the complex number system and functions. Real-world problems are discussed, represented, and solved using advanced algebraic techniques, incorporating technology. The properties and algebra of functions, including polynomial, exponential, logarithmic, piece-wise, radical, and rational, are analyzed and applied, as well as conics, matrices, systems of equations, sequences, and series. Prerequisite: Successful completion of Geometry.
Investigations in Science 7 (IS7)
Like IS6, IS7 is a problem/project based curriculum. Instruction is interwoven around a relevant problem/project to allow a focus for student learning. Students engage in minds-on inquiry and hands-on explorations, productive discourse and purposeful reading and writing. Units studied in IS7 center around topics related to biochemistry, genetics, structure and function and biotechnology. Students engage in science, technology, engineering and mathematics (STEM) in order to propose solutions to identified problems.

INVESTIGATIONS IN EARTH/SPACE SYSTEMS-GRADE 8 (IESS)
The study of Earth/Space Systems Science occurs in a dynamic learning environment. Resources and information on Earth systems can be gathered from a variety of sources and viewpoints such as direct sampling, arrays of instruments and detectors on the surface, orbiting satellites, and deep-space probes. The students explore several of the interrelated spheres within each broad topic of study. Modules in the course may be interchanged to give teachers flexibility in focusing student’s activities to investigate current natural events. Modules are designed to provide differentiated instruction based on variations in student learning modalities and on the time needed to master course objectives.

PHYSICAL EDUCATION/HEALTH EDUCATION

PHYSICAL EDUCATION 7, PHYSICAL EDUCATION 8
Middle school physical education instruction focuses on standards-based content that has been categorized into three measurement topics: health-related fitness, movement skills and concepts, and personal and social responsibility. The learning tasks in physical education emphasize and teach problem-solving and decision-making skills. Middle school students participate in learning
tasks that are organized into personal development and tactical games activities. These activities provide opportunities for students to learn specific criteria aligned to each measurement topic. Personal development activities center on creative expression or individual gains through participation in the learning tasks. Tactical games activities concentrate on the application of tactics and strategies to the learning tasks. Tactical games activities are arranged into three conceptual classifications: invasion, net/wall, and target. Students in Grade 7 and 8 receive instruction in a variety of the following activities:

- **Personal Development:** Creative movement/dance, gymnastics, weight training, track and field, cross-country, and wrestling
- **Invasion:** Basketball, soccer, street hockey, lacrosse, field hockey, flag football, speedball, and team handball
- **Net/Wall:** Volleyball, badminton, tennis, table tennis, and pickle ball
- **Target:** Archery, golf, and bowling

**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. Health literate students have the knowledge, skills, and ability to maintain and enhance personal health and fitness; create and maintain safe environments; and access and utilize personal and community resources. Life skills emphasized throughout the program include goal-setting; decision-making; identifying beliefs, attitudes, and motivations; assessing information; and advocacy for personal, family and community health. Comprehensive health education includes the following seven units: mental and emotional health; tobacco, alcohol, and other drugs; nutrition and fitness; safety and injury prevention; family life and human sexuality; and disease prevention and control.

**HEALTH Grade 7**

Students in Grade 7 participate in Project ALERT (Adolescent Learning Effective Resistance Training). Students also complete a unit on basic first aid and may receive certification from the American Red Cross. Parents of Grade 7 students will receive information about the family life and human sexuality unit of instruction prior to the start of classroom instruction. The disease unit includes information about sexually transmitted diseases and infections including HIV/AIDS.

**HEALTH Grade 8**

Students in Grade 8 receive nine weeks of health education. Special emphasis on stress management and prevention of depression is included in Grade 8 through Red Flags, a collaborative project with the Mental Health Association of Montgomery County. Parents of Grade 8 students will receive information about the family life and human sexuality unit of instruction prior to the start of
classroom instruction. Information about teen pregnancy prevention and sexually transmitted disease is included in Grade 8 health education.

**In grades 6, 7, and 8,** (parents/guardians must sign a permission form checking “yes” for their child to participate in the units involving family life and human sexuality instruction.) 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 that does not include information about human sexuality or disease prevention including HIV/AIDS.

**WORLD LANGUAGES**

**SPANISH 1A OR 1B** (full year; .5 high school credit course)
**SPANISH 3A/2B** (full year; 1.0 high school credit course)
**Español Para Hispanohablantes 1A/B** (Estudiante habla español en casa and requires placement test for entry)
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. Students are encouraged to use the language beyond the school setting and keep informed of current events in countries where the target language is spoken.

**INSTRUMENTAL MUSIC**

**BEGINNING BAND** (full year)
This course is designed for students who wish to learn to play a band instrument for the first time or continue developing their basic facility on a band instrument. Attention is focused on reading musical notation, tone production, and making aesthetic musical judgments and decisions. Beginning Band provides students the opportunity to begin their training on woodwind, brass, or percussion instruments as aligned with the National Standards for Music Education. Public and in-school performances are mandatory.
INTERMEDIATE BAND (full year)
Students develop and refine their instrumental technique and musical comprehension, cultivating greater insight into the interpretation of band literature. Emphasis is placed on strengthening note reading and rhythmic understanding, functioning as an ensemble, and following a conductor. 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. Music theory is explored through the performance and recognition of major scales, diatonic/chromatic intervals, and simple melodic dictation. 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. Public and in-school performances are mandatory. (*Music teacher approval required.*)

ADVANCED BAND (full year)
Students develop and refine their instrumental technique and musical comprehension, cultivating greater insight into the interpretation of band literature. Emphasis is placed on strengthening note reading and rhythmic understanding, functioning as an ensemble, and following a conductor. 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. Music theory is explored through the performance and recognition of major scales, diatonic/chromatic intervals, and simple melodic dictation. 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 begin to assume leadership roles within the large performing ensemble. Exploratory experience may be offered in orchestra, jazz ensemble, and solo/ensemble performance. Public and in-school performances are mandatory. (*Music teacher approval required.*)

BEGINNING ORCHESTRA (full year)
This course is designed for students who wish to learn to play a string instrument for the first time or continue developing their basic facility on a string instrument. Attention is focused on reading musical notation, tone production, and making aesthetical musical judgments and decisions. In-school performances are mandatory. Beginning Orchestra provides students the opportunity to begin their training on a string instrument (violin, viola, cello, double-bass) as aligned with the National Standards for Music Education. Public and in-school performances are mandatory.

INTERMEDIATE ORCHESTRA (full year)
Students refine skills and develop more advanced performance techniques. The course stresses developing technical skills necessary to perform music at the MODA grade II level. Emphasis is placed on strengthening note reading and rhythmic understanding, functioning as an ensemble, and following a conductor. Students learn melodic form and construction as they examine and perform more complex folk arrangements and compositions from master composers. Students discuss the social and intellectual influences affecting the creation of the music that they are studying. Students
develop aesthetic criteria for measuring the quality of an instrumental performance. Public and in-school performances are mandatory. *(Music teacher approval required.)*

**ADVANCED ORCHESTRA (full year)**

Students develop and refine their instrumental technique and musical comprehension, cultivating greater insight into the interpretation of orchestra literature. Emphasis is placed on strengthening note reading and rhythmic understanding, functioning as an ensemble, and following a conductor. 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. Music theory is explored through the performance and recognition of major scales, diatonic/chromatic intervals, and simple melodic dictation. 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 begin to assume leadership roles within the large performing ensemble. Exploratory experience may be offered in orchestra, jazz ensemble, and solo/ensemble performance. Public and in-school performances are mandatory. *(Music teacher approval required.)*

**GUITAR (full year)**

Students learn beginning guitar technique, including selected major, minor, and seventh chords; basic fingerpicks and strums, and tuning technique. Music theory and historical perspective are studied as they relate to guitar performance. This course is open to all students regardless of musical background. Students will make use of music technology to explore contemporary applications of guitar performance/recording.

**PERCUSSION**

This course is designed to help percussion students further their musical skills outside of regular band class. Students will learn the concepts of rhythm, texture, balance, blend, and rudiments as they develop their role as ensemble members. Students must exhibit a strong work ethic and high level of discipline to be an effective member of this ensemble. This ensemble performs at the winter and spring concerts. There may also be additional performance opportunities throughout the year.
MAGNET FOCUS: DIGITAL DESIGN & DEVELOPMENT COURSES

LIGHTS, CAMERA, LITERACY! (full year)
This course increases literacy in both written and visual text, improves collaboration skills, builds confidence and motivation, and provides opportunities for high-level thinking by using specific strategies. Students transfer their skills as viewers of film to skills on the written page, as well as learn how to read visual text and create effective visual communications. The course focuses on all three areas of the MCPS Moving Image Education – integrating, deconstructing, and creating moving image. Students transfer reading skills such as inference from screen to script page to book. They use critical thinking skills and explore new vocabulary in the areas of lexicography, chess, and film. Students deconstruct information at the literary, dramatic, and cinematic levels. Throughout the course, students reflect on their learning through student-to-student discourse and journal writing. They work collaboratively to apply various skills and use technology to produce an authentic product – a short film.

COMPUTER GAMING, SIMULATION, & ROBOTICS

PROGRAMMING FUNDAMENTALS: ROBOTICS & GAMING (full year)
This course introduces students to engineering design and development through software engineering and robotics technology. Students explore and develop object-oriented programming concepts including: structure and design, variables and decision making, algorithms, data structures, program analysis, and graphics. The course utilizes hands-on experiences. Students complete works collaboratively to write code and program robot behaviors using motors and rotation, touch, sound, light, and ultrasonic sensors.

DISCOVERING PROGRAMMING CONCEPTS A/B (full year; 1.0 high school elective credit)
This is an advanced level course in which students continue the work from Programming Fundamentals. Students explore advanced computer science concepts such as algorithms, variables and constants, decision structures, looping structure, functions, arrays, and graphics. The course utilizes hands-on experience and VISUAL BASIC programming language.
Prerequisite: Successful completion of Programming Fundamentals and Algebra I.
DIGITAL ART

COMPUTER ART (full year)
During this course, students are introduced to the principles of color, texture, and form using a variety of media including drawing, painting, and digital art. Students will apply the basic principles as they create original pieces in both the traditional and digital format. Historically significant and contemporary art examples representing a variety of cultures are investigated and represented in the creative production process. Students will learn to evaluate and critique personal artwork and the artwork of others.

ART 8 (full year)
Students in Grade 8 refine their skills and develop their own artistic style. Students continue to explore the role of artists in the past and their influence on contemporary society. Students improve craftsmanship and refine creative processes through units in design, drawing, painting, ceramics, sculpture, printmaking, and collage. Grade 8 units further student knowledge of art history and techniques using master works as inspiration.

WEB DESIGN AND DEVELOPMENT

WEB FUNDAMENTALS (full year)
The effective and efficient use of the world-wide-web as a source for sharing information has become critical to success in both the academic and professional worlds. This hands-on course will provide students an opportunity to create their own websites adding complexity as the course progresses. Student skill development will progress from one-dimensional web pages to sites that are interactive and include animation. A variety of software and technology tools will be incorporated throughout the course.
WEBSITE DEVELOPMENT A/B (full year; 1.0 high school credit)
This is an advanced level course in which students continue their work from Website Development Fundamentals. Students learn web design from storyboard to finished online web page and develop actual sites using HTML, JavaScript, Cold Fusion, Flash animation, ActionScript, web composers, and object-oriented programming languages. Skills in streaming media, server applications, and 3-D animation are developed. Project management provides students with skills to lead teams through projects from inception to completion. Prerequisite: Successful completion of Web Design Fundamentals and Algebra I.

INNOVATIVE MINDS
Students will be empowered to be active participants in the ever-expanding ways in which 21st Century citizens use technological resources to communicate, reason, and solve problems. The class will support students in acquiring strategies for learning in this environment. Students are encouraged to display ingenuity and creativity in devising practical solutions to given tasks. Students use the design cycle to investigate, design, plan, create and evaluate projects. The class will leverage emerging social networking tools to communicate and collaborate. The class will provide access to virtual learning experiences that transcend the classroom walls.

INNOVATIVE MINDS 2
Innovative Minds 2 expands upon the core concepts developed in the first year of the course. Students are asked to explore societal issues in more detail, and develop even more advanced solutions to those problems. Student learning will focus on the development of mobile applications, advanced robotics, and artificial intelligence. Students that applied and were accepted into the first Innovative Minds course are automatically enrolled in Innovative Minds 2.

DESIGNING TECHNOLOGY SOLUTIONS
Students are introduced to engineering design and development through software engineering robotics technology. Students explore and develop an understanding of technological issues and their influence on history. Student projects involve developing software for applications in the study of energy and power, construction, manufacturing, and communication. Student lab experiences involve projects demonstrating their understanding of the design processes, identifying and defining problems, and realizing design solutions.
<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Grade 6</th>
<th>Grade 7</th>
<th>Grade 8</th>
</tr>
</thead>
</table>
| **English**      | • English 6  
• Advanced English 6  
• ESOL 1, 2 or 3 | • English 7  
• Advanced English 7  
• ESOL 1, 2, or 3 | • English 8  
• Advanced English  
• ESOL 1, 2, or 3 |
| **Social Studies** | • Advanced World Studies 6 | • Advanced World Studies 7 | • Advanced United States History 8 |
| **Math**         | • Math 6  
• Math 7  
• Investigation in Mathematics  
• Algebra I A/B | • Math 7  
• Investigations in Mathematics  
• Algebra I A/B  
• Honors Geometry A/B | • Investigations in Mathematics  
• Algebra I A/B  
• Honors Geometry A/B  
• Algebra 2 with Analysis A/B |
| **Science**      | • Investigations in Science 6 | • Investigations in Science 7 | • Earth Science Systems A/B |
| **Physical Education/Health** | • PE/Health 6 | • PE/Health 7 | • PE/Health 8 |
| **Elective Courses** | | | |
| **Reading and Writing** | • Reading 6  
• Read 180 | • Reading 7  
• Read 180 | • Reading 8  
• Read 180 |
| **World Languages** | • Spanish 1A or French 1A | • Spanish 1A or 1B  
• Español para hispanohablantes 1A/B  
(Estudiante habla español en casa and requires placement test for entry) | • Spanish 3A or 3B  
• Español para hispanohablantes 1A/B  
(Estudiante habla español en casa and requires placement test for entry) |
| **Music**        | • Beginning Band  
• Intermediate Band  
• Beginning Orchestra  
• Intermediate Orchestra  
• Guitar | • Beginning, Intermediate, or Advanced Band  
• Beginning Orchestra  
• Intermediate Orchestra  
• Advanced Orchestra  
• Guitar  
• Percussion | • Beginning, Intermediate, or Advanced Band  
• Beginning Orchestra  
• Intermediate Orchestra  
• Advanced Orchestra  
• Guitar  
• Percussion |
| **Technology and Art Elective Options** | • Information and Communication Technologies – ICT6 (required)  
• Lights, Camera, Literacy! | • Computer Art 7  
• Web Design Fundamentals  
• Programming Fundamentals  
• Lights, Camera, Literacy!  
• Innovative Minds | • Designing Technology Solutions A/B  
• Computer Art  
• Innovative Minds 2  
• Art 8  
• Web Design Fundamentals  
• Website Development A/B  
• Programming Fundamentals  
• Discovering Programming Concepts A/B |