WD&CE Youth Program classes are held at all three Montgomery College Campuses. This is a compilation of noncredit classes that are offered in the area of Youth Programs. This listing contains School Year Classes, One Day Classes, and our vast selection of Summer Camp Programs. Not all of these classes are offered each term or at all campuses.

Please check the Youth Web page for current class schedules/dates/times/costs/registration information: http://www.montgomerycollege.edu/youth. New classes may be added to the schedule throughout the year.
SCH Youth Programs

For students grades K-12. Summer camps provide fun, educational, and engaging activities. Continue the experience throughout the school year with Kids College, and one day adventures. Visit the link below for more information on this program.

http://cms.montgomerycollege.edu/wdce/youth.html

Adventures in Math

SCH 367

This fun-filled basic math adventure boosts your basic math skills and confidence while you have fun. Learn math tricks, play games, and create Palindromes with addition. See how simple strategies can help with subtraction, division, and word problems. Learn tricks to help you memorize those pesky multiplication facts. Instructor: Shirley Upchurch

Course Outcomes:
Outcomes are not available.

Aggressive Learning I for High School Students

SCH 977

Are you a successful High School student? Are you afraid of feeling overwhelmed with the amount of homework in high school? You study hard but you want to make the grades that you achieved in middle school. If you are experiencing this type of frustration, you should take this course. Learn strategies from an IRT and Team Leader. Learn how to better manage your time, trick your teachers, and work smarter. You are already working hard--now learn how to study efficiently and experience success in High School. Don't fail simply because you're transitioning into High School. Instructor: Don Milner

Course Outcomes:
Outcomes are not available.

Aggressive Learning I for Middle School Students

SCH 969

Do you want to make a successful transition into middle school? Are you afraid of feeling overwhelmed with the amount of homework in middle school? If you achieved good grades in elementary school but are now worried, you should take this course. Learn strategies from a sixth-grade IRT and Team Leader. Learn how to better manage your time, trick your teachers, and work smarter. You are already working hard--now learn how to study efficiently and experience success in middle school. Let us help you transition with ease.

Course Outcomes:
Outcomes are not available.
Aggressive Learning I for Middle School Students

SCH 974

Are you a successful middle-school student? Do you feel overwhelmed with the amount of homework? You study hard but you still aren't making the grades you'd like? If you are experiencing this type of frustration, take this course. Learn strategies from an IRT and Team Leader. Learn how to better manage your time, trick your teachers, and work smarter. You are already working hard—now learn how to study efficiently and experience success in middle school. Instructor: Don Milner

Course Outcomes:
Outcomes are not available.

Aggressive Learning I for Students Entering High School

SCH 971

Are you making a successful transition into grades 9-12? Do you feel overwhelmed with the amount of homework? You study hard but you still aren't making the grades that you like? If you are experiencing this type of frustration, take this course. Learn strategies from an IRT and Team Leader. Learn how to better manage your time, trick your teachers, and work smarter. You are already working hard—now learn how to study efficiently and experience success in high school. Instructor: Don Milner

Course Outcomes:
Outcomes are not available.

Aggressive Learning I for Students Entering Middle School

SCH 967

Do you want to make a successful transition into Middle School? Are you afraid of feeling overwhelmed with the amount of homework in middle school? You achieved good grades in elementary school but are now worried. If you are experiencing this type of frustration, you should take this course. Learn strategies from a sixth-grade IRT and Team Leader. Learn how to better manage your time, trick your teachers, and work smarter. You are already working hard—now learn how to study efficiently and experience success in middle school. Let us help you transition with ease into middle school. Instructor: Don Milner

Course Outcomes:
Outcomes are not available.
<table>
<thead>
<tr>
<th>Course Title</th>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aggressive Learning II for High School Students</strong></td>
<td>SCH 979</td>
<td>This course is specially designed for students who have had, or are currently enrolled in, Aggressive Learning I. Learning objectives reinforce the study skills taught in Aggressive Learning I and give specific study strategies for each core content area, like science, math, social studies, English, and foreign language. Learn tried and true study strategies that help you improve your academic standing. Learn the science behind learning and what motivates you to learn new information. Course Outcomes: Outcomes are not available.</td>
</tr>
<tr>
<td><strong>Aggressive Learning II for Middle School Students</strong></td>
<td>SCH 970</td>
<td>This course is specially designed for students who have had, or are currently enrolled in, Aggressive Learning I. Learning objectives reinforce the study skills taught in Aggressive Learning I and give specific study strategies for each core content area, like Science, Math, Social Studies, English, and Foreign Language. Learn tried and true study strategies that help you improve your academic standing. Learn the science behind learning and what motivates you to learn new information. Instructor: Don Milner Course Outcomes: Outcomes are not available.</td>
</tr>
<tr>
<td><strong>Aggressive Learning II for Students Entering High School</strong></td>
<td>SCH 972</td>
<td>This course is specially designed for students who have had, or are currently enrolled in, Aggressive Learning I. Learning objectives reinforce the study skills taught in Aggressive Learning I and give specific study strategies for each core content area, like Science, Math, Social Studies, English, and Foreign Language. Learn tried and true study strategies that help you improve your academic standing. Learn the science behind learning and what motivates you to learn new information. Instructor: Don Milner Course Outcomes: Outcomes are not available.</td>
</tr>
</tbody>
</table>
### Aggressive Learning II for Students Entering Middle School

**SCH 968**

Designed for students who have had, or are currently enrolled in, Aggressive Learning I. Learning objectives reinforce the study skills taught in Aggressive Learning I and give specific study strategies for each core content area, like Science, Math, Social Studies, English, and Foreign Language. Learn tried and true study strategies that help you improve your academic standing. Learn the science behind learning and what motivates you to learn new information. Instructor: Don Milner

**Course Outcomes:**
Outcomes are not available.

### Algebra I

**SCH 094**

For students who will take Algebra I in the upcoming school year. Topics covered include patterns, relations, equations, and functions (linear and non-linear.)

**Course Outcomes:**
1. Discuss the basic concepts of Algebra I.
2. Solve equations and basic Algebraic problems.
3. Solve mathematical functions.

### Algebra II

**SCH 096**

For students who will take Algebra II, Algebra II with Analysis, IB AAF in the upcoming school year. Topics include polynomial, rational, exponential, and logarithmic functions. Prerequisite: Algebra I

**Course Outcomes:**
1. Examine the matrix theory.
2. Solve equations.
3. Work with polynomial functions.
4. Apply data analysis.
## Biology: Life In The Ocean

**SCH 963**

This continuing education course is designed for gifted and talented students in grades 5-9 and provides an opportunity for students to examine and study marine organisms from each of the major oceanic zones, using both live and preserved specimens. Topics include: comparing the anatomy, reproduction and ecology of live and preserved specimens, dissecting preserved specimens, and examining the role of marine organisms in the ecosystem.

**Course Outcomes:**
1. Examine marine organisms from each major oceanic zone.
2. Compare live and preserved specimens paying close attention to the anatomy, reproduction and ecology of the organisms.
3. Demonstrate the knowledge and ability to dissect preserved specimens.
4. Discuss the role of marine organisms in the ecosystem.

## Biology: Life in the Ocean

**SCH 862**

Marine Biology is the study of marine life. Examine marine organisms from each of the major oceanic zones. Both live and preserved specimens will be available for observation, experimentation, or dissection (preserved only). Develop a greater appreciation and understanding of marine systems, specifically the role these representative organisms play in the ecosystem.

**Course Outcomes:**
1. Examine marine organisms from each major oceanic zone.
2. Examine live and preserved specimens paying close attention to the anatomy, reproduction and ecology of these organisms.
3. Dissect preserved specimens.
4. Discuss the role of marine organisms in the ecosystem.

## Calculus

**SCH 098**

For students who will take AP Calculus (AB or BC), Calculus with Applications in the upcoming school year. Topics covered include continuity, limits, derivatives of functions, and their applications.

**Course Outcomes:**
1. Discuss limits and continuity.
2. Solve derivatives of functions and their applications.
3. Discuss integrals and their applications.
4. Solve techniques of integration and infinite series.
Computer Programming Camp for Boys and Girls

SCH 693

Want to explore how to design and program your own animations or even create your own games? In this class, you will learn the basics of a scripting language so you can create your own animated characters and direct your own cartoons. Have fun while learning important mathematical and computational ideas. Learn to think creatively and work collaboratively as you create your own interactive stories, animations, games, music, and art—and share your creations on the web.

**Course Outcomes:**
Outcomes are not available.

Computer Programming Camp for Boys and Girls

SCH 175

Course description is not available.

**Course Outcomes:**
Outcomes are not available.

Cooking It Up with Kids

SCH 984

Learn to use fractions and measurement concepts, vocabulary, and reading to perform a task and complete a set of directions for a recipe. Create a wonderful snack or meal without using an oven, while reinforcing math and reading concepts and strategies. Get a copy of each recipe made in class to take home and make again later. These recipes can be used as an after school snack or fun for the whole family to make together. Learn the proper way to handle food and utensils to keep safe. Note: There will be no use of raw foods or sharp objects in this class.

**Course Outcomes:**
Outcomes are not available.

Creative Speaking and Writing

SCH 823

Learn to create an impressive presentation that informs, persuades, inspires, and conveys a compelling message. Through practice and feedback, master the techniques for delivering consistent, successful presentations. Create powerful visual aids to add impact, and learn the tools and techniques needed to grab and hold the interest of an audience. Overcome your public speaking fears and gain confidence to deliver polished presentations of any kind. Instructor: Nekesha Price

**Course Outcomes:**
Outcomes are not available.
Creative Speaking and Writing

SCH 866

Learn to create an impressive presentation that informs, persuades, inspires, and conveys a compelling message. Through practice and feedback, master the techniques for delivering consistent, successful presentations. Create powerful visual aids to add impact, and learn the tools and techniques needed to grab and hold the interest of an audience. Overcome your public speaking fears.

Course Outcomes:

Outcomes are not available.

Creative Speaking and Writing

SCH 738

Learn to create an impressive presentation that informs, persuades, inspires, and conveys a compelling message. Through practice and feedback, master the techniques for delivering consistent, successful presentations. Create powerful visual aids to add impact, and learn the tools and techniques needed to grab and hold the interest of an audience. Overcome your public speaking fears.

Course Outcomes:

Outcomes are not available.

Effective Writing

SCH 964

Writing is one of the most important skills needed to succeed academically. Learn some of the practical skills for effective writing. Practice writing and gain confidence in recognizing and correcting grammatical errors and understanding the fundamentals of sentence structure, punctuation, and word usage. Learn techniques for generating divergent ideas for compositions and story writing.

Course Outcomes:

Outcomes are not available.
Empowered Writing

**SCH 143**

Language is power – learn to use this power to discover the writer within you. Build and develop practical writing skills that you will use in the classroom and beyond. Working with other students, with the instructor, and on your own, you will respond to readings, persuade others, and support your position. Learn to express your opinions, collaborate with others, and confer with the instructor on your writing. By the end of the course, you will have produced your own portfolio of written work. Instructor: TBA

**Course Outcomes:**
1. Apply practical writing skills in your writing.
2. Write various types of writings, such as responding to reading, persuading others, and supporting your position.
3. Use team-building skills to work in group and collaborate with others.
4. Demo

Everyone’s a Star

**SCH 965**

Experience first hand what it’s like to work with a team to "put on" a play that's fun and educational at the same time. Go through auditioning, rehearsing, creating costumes, putting on make-up, gathering props, building sets and, finally, performing, all within the boundaries of fun and direction. Each student gets an on-stage part, and is part of the performance process. Fun guaranteed. ACTORS: Please dress comfortably for each rehearsal; wear shoes that have backs (for safety); and bring a small, healthy snack (ex. fruit or pretzels) and a water bottle with your name on it. Instructor: Claire Dus Sault (Ms. Dus Sault has been working in Educational Theatre for more than 15 years.)

**Course Outcomes:**
Outcomes are not available.

Geometry

**SCH 095**

Geometry

For students who will take geometry or honors geometry in the upcoming school year. Topics covered include properties of two- and three-dimensional geometry shapes and development of mathematical arguments about geometric relationships.

**Course Outcomes:**
Upon completion of this course students will be able to:
1. Discuss the basic concepts of Elementary Geometry.
2. Explore geometric relations and properties.
3. Solve geometric proofs.
4. Solve problems relating trigonometry.
## Gurl Power

### SCH 602

Explore the wonderful world of the Internet. Create and publish a website with your signature personality! Design with professional tools like Adobe Dreamweaver® and Adobe Photoshop®, as well as Wacom® pen tablets. Make your website come alive with animations created in the powerful motion graphics world of Adobe Flash®. Create stunning, high-resolution 3D game environments and characters. Using the intuitive tool set featured in Autodesk Maya®, build your own 3D models and characters.

**Course Outcomes:**
Outcomes are not available.

---

## Gurl Power

### SCH 601

Explore the wonderful world of the Internet. Create and publish a website with your signature personality! Design with professional tools like Adobe Dreamweaver® and Adobe Photoshop®, as well as Wacom® pen tablets. Make your website come alive with animations created in the powerful motion graphics world of Adobe Flash®. Create stunning, high-resolution 3D game environments and characters. Using the intuitive tool set featured in Autodesk Maya®, build your own 3D models and characters.

**Course Outcomes:**
Outcomes are not available.

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## Keyboarding for Computers

### SCH 062

Keyboarding for Computers

It's not too soon to learn basic keyboarding skills. Don't get caught in the hunt-and-peck method trap! Using state-of-the-art computer tools, learn correct finger position so you will be an efficient computer operator. One student per IBM-compatible computer. Instructor: Barbara Thorn

**Course Outcomes:**
Outcomes are not available.

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## Keyboarding for Computers

### SCH 416

It's not too soon to learn basic keyboarding skills. Don't get caught in the hunt-and-peck method trap! Using state-of-the-art computer tools, learn correct finger position so you will be an efficient computer operator. One student per IBM-compatible computer. Instructor: Barbara Thorn

**Course Outcomes:**
Outcomes are not available.
## Keyboarding for Microcomputers

**SCH 294**

It’s never too soon to learn basic keyboarding skills. Don’t get caught in the “hunt-and-peck” method trap! Learn correct finger positions so you will be an efficient computer operator. One student per IBM-compatible computer.

**Course Outcomes:**
Outcomes are not available.

## Master Your Presentations

**SCH 740**

Wow your classmates! Learn to write and present your speeches using the latest technology. Working individually and in small groups. Learn to inform, persuade, and entertain while mastering Microsoft PowerPoint, Publisher, and inspiration software. Instructor: Anita Blank

**Course Outcomes:**
Outcomes are not available.

## Mastering Writing Techniques

**SCH 523**

Do you want an opportunity to improve your writing skills? If you are an avid reader or a serious writer, then this course is for you. Examine samples of children's books by famous writers. Learn how they use figurative language to create masterful works of art. Share ideas and critique works by your peers. Then, create your very own masterpiece. Instructor: Anita Blank

**Course Outcomes:**
Outcomes are not available.

## Math Logic

**SCH 691**

Develop math skills in logic and problem solving with challenging activities and games. A variety of hands-on activities will sharpen mathematical wits and deepen critical-thinking, problem-solving and logical-reasoning skills. Have fun with math, use calculators and computers, play with math games, and explore real world mathematics problems. Graphing projects, manipulatives, cooperative activities, and learning math through art are included. Instructor: Anita Blank

**Course Outcomes:**
Outcomes are not available.
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<tr>
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</thead>
<tbody>
<tr>
<td>Piano for the 2nd and 3rd Grader--Level I</td>
<td>SCH 315</td>
<td>Small Group Piano Lessons for young children for students in grades K-3 from beginning to advanced levels.</td>
<td>Outcomes are not available.</td>
</tr>
<tr>
<td>Piano for the 2nd and 3rd Grader--Level II</td>
<td>SCH 772</td>
<td>Small Group Piano Lessons for young children for students in grades K-3 from beginning to advanced levels.</td>
<td>Outcomes are not available.</td>
</tr>
<tr>
<td>Piano for the 2nd and 3rd Grader-Level IV</td>
<td>SCH 350</td>
<td>Small Group Piano Lessons for young children for students in grades K-3 from beginning to advanced levels.</td>
<td>Outcomes are not available.</td>
</tr>
<tr>
<td>Piano for the First Grader: Level I</td>
<td>SCH 213</td>
<td>Small Group Piano Lessons for young children for students in grades K-3 from beginning to advanced levels.</td>
<td>Outcomes are not available.</td>
</tr>
<tr>
<td>Piano for the First Grader: Level II</td>
<td>SCH 214</td>
<td>Small Group Piano Lessons for young children for students in grades K-3 from beginning to advanced levels.</td>
<td>Outcomes are not available.</td>
</tr>
</tbody>
</table>
### Piano for the First Grader: Level III

**SCH 215**

Small Group Piano Lessons for young children for students in grades K-3 from beginning to advanced levels.

**Course Outcomes:**
Outcomes are not available.

### Piano for the Five Year Old: Level I

**SCH 252**

Small Group Piano Lessons for young children for students in grades K-3 from beginning to advanced levels.

**Course Outcomes:**
Outcomes are not available.

### Piano for the Five Year Old: Level II

**SCH 268**

Small Group Piano Lessons for young children for students in grades K-3 from beginning to advanced levels.

**Course Outcomes:**
Outcomes are not available.

### Piano for the Five Year Old: Level III

**SCH 269**

Small Group Piano Lessons for young children for students in grades K-3 from beginning to advanced levels.

**Course Outcomes:**
Outcomes are not available.

### PIANO//2ND/3RD GRADER--LEV III

**SCH 947**

Small Group Piano Lessons for young children for students in grades K-3 from beginning to advanced levels.

**Course Outcomes:**
Outcomes are not available.
### Pre-Algebra

**SCH 001**

For students who will take Math A, B, C, or IM (or other similar courses) in the upcoming school year. It is also a good review course for future Algebra I students. Topics covered include order of operations, decimals, fractions, percents, pattern, relations, and introduction to functions.

**Course Outcomes:**

Outcomes are not available.

### Pre-Calculus

**SCH 097**

For students who will take Pre-Calculus, Pre-Calculus with Analysis, IB Pre-Calculus, or IB Math Studies. Topics covered include trigonometry, vectors, sequences, and series.  
Prerequisite: Algebra II.

**Course Outcomes:**

1. Discuss data analysis and circular functions.  
2. Solve trigonometric inverses, identities and their applications.  
3. Work with modeling projects.  
4. Solve polar coordinates and complex numbers.  
5. Solve problems involving sequences and series.

### Reading Adventures

**SCH 909**

Travel to many exciting places through the magic of books. Reading, vocabulary, and comprehension skills will be increased through discussions, writing, and art projects. Come journey through the adventures of reading!

**Course Outcomes:**

Outcomes are not available.

### Science Potpourri

**SCH 034**

Delve into a variety of hands-on science activities. Explore the "magic" of magnets and electricity. Complete experiments with balls, vibration, salination, and more. Have fun learning about the scientific process and how to create a valid experiment for your science fair project.

**Course Outcomes:**

Outcomes are not available.
### Smithsonian Museum Tours  
**SCH 434**

Get excited about world discoveries! Tour eight to ten of the seventeen Smithsonian Museums, visit the IMAX Theatre, Einstein Planetarium, and learn about Art, Zoology, Sculptures, Air and Space, Natural History, American History, and other cultures.

**Course Outcomes:**
Outcomes are not available.

### Web Design Camp for Girls/Boys  
**SCH 653**

Learn to make your own website and how to take professional pictures and import them to your site. Explore the basics of color theory and make your website pop with dynamic animations created in Flash®. Create anything from a basic web page to an innovative, artistic site with interactive functions. Then publish your vision online to share with friends, family, our summer web camps, and the world to see.

**Course Outcomes:**
Outcomes are not available.

### Writing Just for Fun  
**SCH 992**

Do you enjoy creative writing? Do you like taking flights of fancy? Multiply your fun in this class, where you can spark the imagination of your classmates by helping to invent amusing short pieces with other budding writers. You'll play some writing games, create small writings on your own, and also get lots of new story ideas for your personal enjoyment.

**Course Outcomes:**
Outcomes are not available.

### Young Artist Program  
**SCH 140**

Paint using different color schemes, work in the style of a master or copy their work, and do a palette knife painting. Carve a clay relief or facial expressions, do a painting using the cracked wax effect, and explore different techniques for painting skies and trees. Learn about Ndebele murals in Africa and do your own design for a mural using their style. Learn about the work of Georgia O'Keeffe, Picasso, and Vincent Van Gogh. Acrylic and tempera paint will be used. Bring an old T-shirt or smock -- when painting with passion, it splashes everywhere!

**Course Outcomes:**
Outcomes are not available.
Young Scientists’ Academy

SCH 379

Course description is not available.

Course Outcomes:
Outcomes are not available.
### SDT Youth Programs

For aspiring actors and actresses at Montgomery College Summer Dinner Theatre. Visit the link below for more information on this program.

http://cms.montgomerycollege.edu/wdce/youth.html

<table>
<thead>
<tr>
<th>Summer Dinner Theatre</th>
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<tbody>
<tr>
<td><strong>SDT 001</strong></td>
<td>Summer Dinner Theatre is an educational experience that focuses on producing musical theatre in a dinner theatre setting. In this intensive 11-week course, we present two major musicals, giving 16 public performances and serving more than 5,000 meals. We look for students who are talented, willing to work hard and have some theatrical experience. Although Summer Dinner Theatre is a college-level course, we encourage talented high school students and interested community members to audition and/or interview for the course. Students can earn back some of the tuition costs through a work option which includes working during dinner (waiting tables, setting-up, etc.) Please go to our website <a href="http://www.montgomerycollege.edu/summerdinnertheatre">www.montgomerycollege.edu/summerdinnertheatre</a> for complete information. If you do not have an internet access, you may call 301-251-7676 for information. Performance auditions and technical position interviews will be held May 4-6, 2007. You must audition and/or interview prior to registering for class. Classes and rehearsals are held Monday through Friday in the evening with some special rehearsals being scheduled on weekends before public performances begin. Public performances will be on weekends, June 15 through July 29. The 2007 shows are Dames At Sea and Ragtime. Summer Dinner Theatre is held in the Theatre Arts Building on the Rockville Campus.</td>
</tr>
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<td><strong>Course Outcomes:</strong></td>
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<tr>
<th>Summer Dinner Theatre</th>
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<tr>
<td><strong>SDT 004</strong></td>
<td>Summer Dinner Theatre is an educational experience that focuses on producing musical theatre in a dinner theatre setting. In this intensive 11-week course, we present two major musicals, giving 16 public performances and serving more than 5,000 meals. We look for students who are talented, willing to work hard and have some theatrical experience. Although Summer Dinner Theatre is a college-level course, we encourage talented high school students and interested community members to audition and/or interview for the course. Students can earn back some of the tuition costs through a work option which includes working during dinner (waiting tables, setting-up, etc.) Please go to our website <a href="http://www.montgomerycollege.edu/summerdinnertheatre">www.montgomerycollege.edu/summerdinnertheatre</a> for complete information. If you do not have an internet access, you may call 301-251-7676 for information. Performance auditions and technical position interviews will be held May 4-6, 2007. You must audition and/or interview prior to registering for class. Classes and rehearsals are held Monday through Friday in the evening with some special rehearsals being scheduled on weekends before public performances begin. Public performances will be on weekends, June 15 through July 29. The 2007 shows are Dames At Sea and Ragtime. Summer Dinner Theatre is held in the Theatre Arts Building on the Rockville Campus.</td>
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</tr>
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</table>
SUMMER DINNER THEATRE (CHILDREN)
SDT 002

Course description is not available.

Course Outcomes:
Outcomes are not available.
Youth Programs

For students grades K-12. Summer camps provide fun, educational, and engaging activities. Continue the experience throughout the school year with Kids College, and one day adventures. Visit the link below for more information on this program.

http://cms.montgomerycollege.edu/wdce/youth.html

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<tr>
<td>&quot;Knockout&quot; Punch Rug Needlework</td>
<td>YOU 693</td>
</tr>
<tr>
<td>Rug work is a time-honored American Folk Tradition. Using simple tools such as yarn and cloth, learn how to make stunning punchwork rugs! Join Jennifer Raymond on a weeklong exploration of this fun and expressive tradition, creating art with both beauty and utility! Supplies are included, and bring your projects home at the end of camp!</td>
<td></td>
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<tr>
<td>Course Outcomes:</td>
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<tr>
<td>3-2-1 Blast-Off!</td>
<td>YOU 114</td>
</tr>
<tr>
<td>This action-packed week will focus solely on rockets and the physics of rocket flight. After learning the model rocket safety code, you will build a number of different rockets. Divided into three groups of altitude trackers, launch preparation, and launchers, you will participate in the launching, mission control, propulsion, and finally recovery of the rockets that were built.</td>
<td></td>
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<tr>
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<tr>
<th>Course Title</th>
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<tbody>
<tr>
<td>3-D Geometry: Let’s Build a City</td>
<td>YOU 417</td>
</tr>
<tr>
<td>Do you love to draw and create? Do you have an appreciation for the structures and architecture around you? If so, this course is for you! Learn to draw, edit, and refine simple shapes and three-dimensional objects. Use your creativity to design a model city with pencil and paper. You don’t have to be an artist to join the fun. By the end of the course you’ll have created your very own model 3-D city.</td>
<td></td>
</tr>
<tr>
<td>Course Outcomes:</td>
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</tr>
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</tbody>
</table>
### Youth Programs

**A Sticky Situation: Duct Tape Art**

**YOU 497**

Duct tape, an art material? Yes it is! This is your chance to explore the many uses for duct tape and how you can use it to create your very own artwork. We’ll use duct tape to create 2-D and 3-D fine art pieces—both functional and nonfunctional. Learn to make items like flowers, bags, and wallets, as well as other 3-D sculptures and 2-D collages. No previous experience is necessary. The sky is the limit!

**Course Outcomes:**

Outcomes are not available.

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**Advanced Piano I**

**YOU 437**

For Advanced Beginners. Piano lessons in a small group setting. Instructor: Sanja Grujic-Vlajnic

**Course Outcomes:**

Outcomes are not available.

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**Advanced Piano--Level I**

**YOU 458**

Course description is not available.

**Course Outcomes:**

Outcomes are not available.

---

**Advanced Piano--Level II**

**YOU 459**

Focus is on advanced piano performance practice and the development of the piano repertoire. Students will be encouraged to play in ensembles, duets and solo, as well as work on advancement of the piano technique. Students should have finished Advanced level I in order to register for this class.

**Course Outcomes:**

Outcomes are not available.

---

**Advanced Piano--Level II**

**YOU 564**

Focus is on advanced piano performance practice and the development of the piano repertoire. Students will be encouraged to play in ensembles, duets and solo, as well as work on advancement of the piano technique. Students should have finished Advanced level I in order to register for this class.

**Course Outcomes:**

Outcomes are not available.
### Advanced Placement Readiness

**YOU 466**

This continuing education course is designed for gifted and talented students in grades 9-11 and provides instruction on preparing students for taking advanced placement courses. Students will learn how to write essays, support opinions using text and data, and scheduling and time management. Topics include: Analysis of articles, essay prompts and sample responses, time management techniques, test taking skills, and understanding standards.

**Course Outcomes:**

1. Analyze college level articles/reading.
2. Use text and data to support opinions and avoid fallacies.
3. Practice time management, organizational and note taking skills.
4. Use rhetorical strategies to improve your understanding of standards found in advanced placement courses.

### Advanced Placement Readiness

**YOU 408**

Prepare for taking advanced placement courses. Analyze articles and essay prompts and sample responses, and heighten your comfort with the testing situation. Learn to support your opinions by using text and data to accomplish the task. Using logical thinking, enhance your awareness of the structure of your arguments and avoid fallacies in reasoning. Practice time management skills. Learn ways to use calendars to make more effective use of your time. Add rhetorical strategies to your repertoire of testing skills and improve your understanding of standards found in advanced placement courses.

**Course Outcomes:**

1. Analyze college level articles/reading.
2. Use text and data to support opinions and avoid fallacies.
3. Practice time management, organizational, and note taking skills.
4. Use rhetorical strategies to improve your understanding of standards found in advanced placement courses.

### Advanced Robotics - The Ultimate Experience

**YOU 666**

Build and take home the Jungle Robot, an advanced level robot. Learn the many steps in the assembly process, and learn how different types of gears mesh and are driven by a motor. Connect the motor, battery and microphone to a circuit board, which will program your sound activated (clap of the hand) robot. Test them for speed, strength and endurance in Sumo battles, tugs-of-war and vehicle distance timings, etc.

**Course Outcomes:**

Outcomes are not available.
Adventures in Mathematics

YOU 723

This fun-filled basic math adventure boosts your basic math skills and confidence while you have fun. Learn math tricks, play games, explore online math games, and create palindromes with addition. See how simple strategies can help with basic facts and word problems. Learn tricks to help you memorize those pesky multiplication facts.

Course Outcomes:
Outcomes are not available.

Adventures in Robotics

YOU 688

Here’s your chance to explore the exciting world of robotics! Working in teams, construct and program robots, then compete in fun challenges to earn prizes. Learn the basics of design and programming and get hands-on experience in making your robots “see” and move. Invite your friends and family to come on the last day of camp to cheer you on at the final competition and awards party! No previous experience in robotics necessary.

Course Outcomes:
Outcomes are not available.

Adventures in Robotics

YOU 064

Here's your chance to explore the exciting world of robotics! Working in teams, construct and program robots and compete in fun challenges to earn prizes. Learn the basics of design and programming and get hands-on experience in making your robots "see" and move. Invite your friends and family to come on the last day of camp to cheer you on at the final competition and awards party! No previous experience in robotics necessary.

Course Outcomes:
Outcomes are not available.

After Care for Summer Youth Programs

YOU 339

After Care offers caretaking services for children after the summer program day ends. The children are provided with a safe and relaxed environment in which to enjoy a variety of activities. Staff continuously strive to keep the program activities flexible and appealing. There are a limited number of spaces available, and applications will be accepted on a first-come, first-served basis.

Course Outcomes:
Outcomes are not available.
After Care for Summer Youth Programs

YOU 338

After Care offers caretaking services for children after the summer program day ends. The children are provided with a safe and relaxed environment in which to enjoy a variety of activities. Staff continuously strive to keep the program activities flexible and appealing. There are a limited number of spaces available, and applications will be accepted on a first-come, first-served basis.

Course Outcomes:
Outcomes are not available.

Aggressive Learning for High School Athletes

YOU 684

Learn how to stay ON your team and OFF the ineligibility list... So you made the team! That’s great! This year is going to be a breakout season for you except you may not be academically eligible. Your Coach, Parents, Teachers, and Peers are expecting you to start next season but you struggle academically during the off season. Maybe you aren’t struggling to be academically eligible but you are thinking about playing sports in college. Any of this sounds familiar? If you answered yes then you should sign up for this class and learn how to learn. In addition, find out how study skills can help you in College.

Course Outcomes:
Outcomes are not available.

Aggressive Learning for High School Athletes

YOU 683

Learn how to stay ON your team and OFF the ineligibility list... So you made the team! That’s great! This year is going to be a breakout season for you except you may not be academically eligible. Your Coach, Parents, Teachers, and Peers are expecting you to start next season but you struggle academically during the off season. Maybe you aren’t struggling to be academically eligible but you are thinking about playing sports in college. Any of this sounds familiar? If you answered yes then you should sign up for this class and learn how to learn. In addition, find out how study skills can help you in College.

Course Outcomes:
Outcomes are not available.

Aggressive Learning I for High School Students

YOU 359

Are you a successful high school student? Are you afraid of feeling overwhelmed with the amount of homework in high school? Do you study hard but you don’t make the grades that you achieved in middle school? If you are experiencing this type of frustration, you should take this course. Learn strategies from an IRT and Team Leader. Learn how to better manage your time and work smarter.

Course Outcomes:
Outcomes are not available.
Aggressive Learning I for Middle School Students
YOU 171
Are you a successful middle school student? Do you feel overwhelmed with the amount of homework? You study hard but you still aren't making the grades you'd like. If you are experiencing this type of frustration, take this course. Learn strategies from an IRT and Team Leader. Learn how to better manage your time, trick your teachers, and work smarter. You are already working hard - now learn how to study efficiently and experience success in middle school. Instructor: Don Milner

Course Outcomes:
Outcomes are not available.

Aggressive Learning I for Students Entering Middle School
YOU 460
Do you want to make a successful transition into middle school? Are you afraid of feeling overwhelmed with the amount of homework in middle school? If you achieved good grades in elementary school but are now worried, you should take this course. Learn strategies from a sixth-grade IRT and Team Leader. Learn how to better manage your time, trick your teachers, and work smarter. You are already working hard—now learn how to study efficiently and experience success in middle school. Let us help you transition with ease.

Course Outcomes:
Outcomes are not available.

Aggressive Learning II for High School Students
YOU 360
This course is specially designed for students who have had, or are currently enrolled in, Aggressive Learning I. Learning objectives reinforce the study skills taught in Aggressive Learning I and give specific study strategies for each core content area, like science, math, social studies, English, and foreign language. Learn tried and true study strategies that help you improve your academic standing.

Course Outcomes:
Outcomes are not available.

Aggressive Learning II for Middle School Students
YOU 172
This course is specially designed for students who have had, or are currently enrolled in, Aggressive Learning I. Learning objectives reinforce the study skills taught in Aggressive Learning I and give specific study strategies for each core content area, like Science, Math, Social Studies, English, and Foreign Language. Learn tried and true study strategies that help you improve your academic standing. Learn the science behind learning and what motivates you to learn new information. Instructor: Don Milner

Course Outcomes:
Outcomes are not available.
Aggressive Learning II for Middle School Students

YOU 068

This course is specially designed for students who have had, or are currently enrolled in, Aggressive Learning I. Learning objectives reinforce the study skills taught in Aggressive Learning I and give specific study strategies for each core content area, like Science, Math, Social Studies, English, and Foreign Language. Learn tried and true study strategies that help you improve your academic standing. Learn the science behind learning and what motivates you to learn new information.

Instructor: Don Milner

Course Outcomes:

Outcomes are not available.

Aggressive Learning II for Students Entering Middle School

YOU 461

If you have taken or are currently enrolled in Aggressive Learning I, this class is a great next step for you. Learning objectives reinforce the study skills taught in Aggressive Learning I and give specific study strategies for each core content area, like science, math, social studies, English, and foreign language. Learn tried and true study strategies that help you improve your academic standing. Learn the science behind learning and what motivates you to learn new information.

Instructor: Don Milner

Course Outcomes:

Outcomes are not available.

Algebra I

YOU 173

This course is designed for students who will take Algebra I in the upcoming school year. Topics covered include patterns, relations, equations, and functions (linear, quadratic, and exponential), calculating using exponents and radicals, ratio and proportions, and systems of linear equations, factoring quadratics, completing the square, and solving quadratic formulas.

Course Outcomes:

Discuss basic concepts of Algebra 1.

Calculate using exponents and radicals, ratio and proportion, and systems of linear equations.

Solve linear equations and inequalities.

Demonstrate the ability to factor quadratics, complete the square, and solve quadratic formulas.
Algebra II

YOU 174

This course is designed for students who will take Algebra II, Algebra II with Analysis, IB AAF in the upcoming school year. Topics include polynomial, rational, exponential, and logarithmic functions, factorization, graphing functions, and sequence and series.

**Course Outcomes:**

- Solve polynomial and rational functions.
- Solve quadratic equations with clever factorizations.
- Calculate using complex numbers, graphing functions, and sequences and series.
- Calculate using exponents and logarithmic functions.

All-ABUZZ About Math

YOU 520

Are you interested in advancing your math skills while exploring a variety of manipulatives? Using math manipulatives help you to understand math ideas and build confidence in math reasoning. Make math interesting and fun while answering questions and solving problems. You’ll learn to sort, classify, sequence, compare, and graph using numbers, shapes, and other objects.

**Course Outcomes:**

Outcomes are not available.

All-Terrain Tracker Workshop

YOU 661

Build and take home your very own All-Terrain Tracker Vehicle that travels rough terrain overcoming objects in its path. Conquer the Sciensational Workshops’ own tracker course that includes sand, stones, twigs, and balls as part of the challenge. Hold a timed race and learn all about gears. Work in a group to design a robot you can control. Build a Sumo wrestler and be part of our battle box events.

**Course Outcomes:**

Outcomes are not available.
Anatomy and Physiology in Diversity

YOU 280

This course is designed to explore information underlying recent ideas on human evolution and examine the evidence that links modern humans with other higher animals (Primates). Students will learn to describe the parts of a modern human skull and distinguish between the skulls and the skeletons of modern male and female humans and apes. Students should come prepared to dissect animal parts, including eyeballs, heart, stomach, lungs, and learn their functions.

Course Outcomes:

1. Examine the recent ideas on human evolution and the evidence that links modern man with primates.
2. Describe the parts of a modern human skull.
3. Distinguish between the skulls and skeletons of modern humans and apes.

Animated Books

YOU 478

ASAP, Inc. presents Animated Books. Calling all cartoon fans and budding authors! Learn to use your imagination to create stories and bring them to life. Learn how to use computer programming and animation to create characters, scenes, and even your own sound track. If you like to create and have fun while you learn, then this class is for you! This course provides a foundation in computer literacy skills and concepts while exploring elements of literature.

Course Outcomes:

Outcomes are not available.

App Adventures! The Next Level

YOU 475

Continue your quest to make the next viral app! Whether you want to move past the basic techniques learned in App Attack or want to jump right in; we are ready for you! Create a mobile game app and explore more in-depth programming concepts. The option to publish will be offered to every student, but final decisions on publishing are the sole discretion of Apple, Amazon, or Google. No prior experience is necessary and you do not need to own a smart phone or tablet.

Course Outcomes:

Outcomes are not available.

App Attack! Make Your First Game App

YOU 474

Explore the App universe and create your own mobile application or mobile game! Explore the world of phone-based and tablet applications. In addition to learning the basics of mobile app design and games, you will also see firsthand how the world of App’s publishing functions. No prior experience is necessary and you do not need to own a smart phone or tablet.

Course Outcomes:

Outcomes are not available.
App Attack! Make Your First Game App
YOU 560
Take the first steps into the world of mobile app design and customize your own game app! Using a specialized game development tool, explore the world of web-based apps. In addition to learning the basics of mobile app design and game development, you will also see firsthand how the world of Apps publishing functions. Student-created apps will be accessible on a private site and can be played on any mobile device or computer.

Course Outcomes:
Outcomes are not available.

Arabian Sindbads
YOU 735
Arabian Sindbads will visit the Arab world and learn about its language and culture through arts, fun and play. Get your hands, feet and brain busy with Arabic arts, music, dance and more. Fun, interactive games and hands-on activities will keep you entertained while exploring and learning all day long.

Course Outcomes:
Outcomes are not available.

Architectural Design: An Introduction
YOU 694
This continuing education course is designed for gifted and talented students in grades 9 - 12, and provides instruction on the design and construction of residential and commercial buildings. Topics include: concepts of building design and spatial analysis; reviewing the historical aspects of civil engineering and architecture; and current innovations being made in the architecture industry today.

Course Outcomes:
1. Determine the principles and processes of the design and construction of residential and commercial buildings.
2. Review the basic concepts of building design and spatial analysis.
3. Examine the historical aspects of civil engineering and architecture.
4. Examine the current innovations being made in the architecture industry today.
Architectural Design: An Introduction

YOU 479

This continuing education course is designed for gifted and talented students in grades 9 - 12, and provides instruction on the design and construction of residential and commercial buildings. Topics include: basic concepts of building design and spatial analysis; reviewing the historical aspects of civil engineering and architecture; and current innovations being made in the architecture industry today.

Course Outcomes:

1. Determine the principles and processes of the design and construction of residential and commercial buildings.
2. Review the basic concepts of building design and spatial analysis.
3. Examine the historical aspects of civil engineering and architecture.
4. Examine the current innovations being made in the architecture industry today.

Battle-Bot Build-A-Thon

YOU 372

Course description is not available.

Course Outcomes:

Outcomes are not available.

Be a Real-Life Investigative Reporter!

YOU 400

Course description is not available.

Course Outcomes:

Outcomes are not available.

Before Care for Summer Youth Programs

YOU 341

Before Care offers caretaking services for children before the summer program day begins. The children are provided with a safe and relaxed environment in which to enjoy a variety of activities. Staff continuously strive to keep the program activities flexible and appealing. There are a limited number of spaces available, and applications will be accepted on a first-come, first-served basis.

Course Outcomes:

Outcomes are not available.
Before Care for Summer Youth Programs

**YOU 340**

Before Care offers caretaking services for children before the summer program day begins. The children are provided with a safe and relaxed environment in which to enjoy a variety of activities. Staff continuously strive to keep the program activities flexible and appealing. There are a limited number of spaces available, and applications will be accepted on a first-come, first-served basis.

**Course Outcomes:**
Outcomes are not available.

Before/After Care for Summer Youth Programs

**YOU 343**

Before/After Care offers caretaking services for children before and after the summer program day. The children are provided with a safe and relaxed environment in which to enjoy a variety of activities. Staff continuously strive to keep the program activities flexible and appealing. There are a limited number of spaces available, and applications will be accepted on a first-come, first-served basis.

**Course Outcomes:**
Outcomes are not available.

Beginning Piano--Level I

**YOU 457**

Beginning Piano for grades 4 and 5. Piano lessons in small group setting. Instructor: Sanja Grujic-Vlajnic

**Course Outcomes:**
Outcomes are not available.

Beginning Piano--Level II

**YOU 660**

Beginning Piano for grades 4 and 5. Piano lessons in small group setting. Instructor: Sanja Grujic-Vlajnic

**Course Outcomes:**
Outcomes are not available.
Beyond Bricks - LEGO Hacks and Electronics Lab

YOU 597

A hands-on beginning electronics class for LEGO® fanatics! Use raw components to assemble circuits, light LEDs, electrify motors, and integrate microcontrollers to bring LEGO® bricks to life! Design and build electrified creations to take home. Perfect for young makers who want to take building with bricks to a whole new level!

Course Outcomes:
Outcomes are not available.

Biotechnology and Diversity

YOU 176

Biotechnology and diversity of organisms go hand in hand. Biotechnology allows scientists to establish diversity. In recent times biotechnology techniques have enabled crime solving, paternity testing, cloning of cells leading to reproduction without male gametes, production of insulin for diabetics, and growth factors. Camp participants will master how to extract DNA; solve paternity issues and problems using agarose gel electrophoresis/DNA fingerprinting; solve other genetic problems, solve bone mysteries, master microscope use and care; discover the various organisms that share our planet; develop critical thinking ability and skills; and study world cultures through video workshops.

Course Outcomes:
1. Demonstrate an understanding of how to extract DNA.
2. Solve paternity issues and problems using agarose gel electrophoresis/DNA fingerprinting.
3. Solve other genetic problems and bone mysteries.
4. Review microscope use and care.
5. Discuss various organisms that share our planet.

Black Rocket

YOU 648

Black Rocket is a one Day Adventure program. STEM. Students select two of these class topics to discover Creative Robotics, Code Creators, Video Game Design, Digital Animation, FX:Special Effects, or Stop Motion Film Making. Selections vary from year to year

Course Outcomes:
Outcomes are not available.
**Blowfish Robocraft**  
YOU 662

It is loads of fun to build and take home a Robotfish with big, puffy cheeks. Watch it as it moves in a miniature pool. The Blowfish Robocraft is propelled forward by a left/right moving tail fin. Learn how its motor works as you have fun building it. Enter the Sciensational races and see how fast your Blowfish Robocraft goes. Learn about gears and circuits. Design and build other robots that can perform many tasks. Build a car for speed and go on the obstacle course.

**Course Outcomes:**
Outcomes are not available.

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**Breaking Bricks - LEGO Hacks and Mods**  
YOU 491

Learn to drill, cut, and modify plastic bricks to create customized LEGO® take-home projects. Novice and experienced builders are coached to use tools safely, experiment with materials, expand design skills and creativity. All materials provided! Perfect for plastic brick builders who are looking for unique and personalized design challenges!

**Course Outcomes:**
Outcomes are not available.

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**Build It! Furniture Fundamentals**  
YOU 598

In this awesome full-day workshop, master craftspersons coach novice and experienced woodworkers through the fabrication of a well-crafted, durable, and attractive chair or small table of their own design. You will sketch and produce a measured drawing and plan of procedure. You will safely and accurately measure, cut, shape, plane, sand, drill, and join furniture-grade materials. The workshop is equipped with professional workbenches and tools that are scaled to fit young makers. Projects are finely sanded and go home with tools needed to apply paint, stain, or clear coat.

**Course Outcomes:**
Outcomes are not available.

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**Build it! Maker Tools and Materials**  
YOU 599

Young makers design and construct big structures and amazing inventions with cardboard, wood, plastics, and foam. You will safely and accurately use drilling, cutting, and joining tools to build big and small items to complete a series of personalized design challenges focusing on experimentation, exploration, and improving designs. This is an essential workshop for tinkerers, inventors, and engineers. All projects go home!

**Course Outcomes:**
Outcomes are not available.
Builders of the Future

YOU 445
A One Day Adventure. STEM. Students select two classes. Topics include: machine sewn parachutes, game controller construction, Engineering Microrobots, Motorized light workshop. Topics vary each year and depend on the age group targeted.

Course Outcomes:
Outcomes are not available.

Builders of the Future

YOU 527
A One Day Adventure. STEM. Students select two classes. Topics include Build a Robot Rock City, Rubberband racers, light sculptures, wigglebots, breaking bricks, woodshop. Topics vary each year and depend on the age group targeted

Course Outcomes:
Outcomes are not available.

Builders of The Future Parent Session

YOU 465
Workshops for parents of GT Students that will provide problem solving techniques and solutions.

Course Outcomes:
How various reinforcements can be applied
Outlining activities that can lead to success.

Calculus

YOU 177
This class is designed for students who will take AP Calculus (AB or BC), Calculus with Applications in the upcoming school year. Topics covered include continuity, limits, derivatives of functions, and their applications.

Course Outcomes:
1. Discuss limits and continuity.
2. Solve derivatives of functions and their applications.
3. Discuss integrals and their applications.
4. Solve techniques of integration and infinite series.
Can You Dig It? Fossil Hunt - Do you dig dinosaurs?
YOU 663

Archaeology and Paleontology seem like big words. In this class, we’ll make them come alive. Join in a simulated fossil excavation, uncovering the different bones of a dinosaur. Assemble the bones to form a completed 3-dimensional dinosaur to take home. Using excavation tools, labels and specimen bags, and geological time and fossil charts, make a plaster fossil replica of an ammonite, Tyrannosaurus rex tooth or choose from other molds. Identify 20-million year old shark's teeth and see other fossil replicas such as a cave bear tooth, an ammonite, a Tyrannosaurus rex tooth or a dinosaur egg. Work with our rock and mineral collection, identify different rocks and minerals, and see and hold our giant pumice rock specimen taken from Mt. St. Helens.

Course Outcomes:
Outcomes are not available.

Cartooning, Comics and Manga
YOU 159

Explore the many forms of cartoon drawings (caricatures, one-panel sight gags, editorial cartoons), comic strips/books (superhero comics, adventurous illustrations, westerns sci-fi & detective comics), long form illustrated narratives (graphic novels, non-fiction subjects), and Japanese manga. Apply your powers of observation and imagination to a variety of projects: creating original characters, designing pages, drawing caricatures, making flip books, and developing a comic strip/book. You will be encouraged to experiment with various drawing media and techniques. Instructor: Ellen Vartanoff, freelancer for Marvel & D.C. Comics.

Course Outcomes:
Outcomes are not available.

Cartooning, Comics, and Manga
YOU 178

Explore the many forms of cartoon drawings (caricatures, one-panel sight gags, editorial cartoons), comic strips/books (superhero comics, adventurous illustrations, westerns sci-fi & detective comics), long form illustrated narratives (graphic novels, non-fiction subjects), and Japanese manga. Apply your powers of observation and imagination to a variety of projects: creating original characters, designing pages, drawing caricatures, making flip books, and developing a comic strip/book. You will be encouraged to experiment with various drawing media and techniques. Instructor: Ellen Vartanoff, freelancer for Marvel & D.C. Comics.

Course Outcomes:
Outcomes are not available.
**Cartooning, Comics, and Manga**

YOU 158

Explore the many forms of cartoon drawings (caricatures, one-panel sight gags, editorial cartoons), comic strips/books (superhero comics, adventurous illustrations, westerns sci-fi & detective comics), long form illustrated narratives (graphic novels, non-fiction subjects), and Japanese manga. Apply your powers of observation and imagination to a variety of projects: creating original characters, designing pages, drawing caricatures, making flip books, and developing a comic strip/book. You will be encouraged to experiment with various drawing media and techniques. Instructor: Ellen Vartanoff, freelancer for Marvel & D.C. Comics.

**Course Outcomes:**

Outcomes are not available.

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**Chin Up, Girl!**

YOU 476

Young STRONG ladies...discover your voice, what you stand for, what you believe in, and what truly makes you happy. Build confidence through self-expression and personal connections. Learn strategies to ease school stress, embrace leadership, and promote healthy friendships. Build mental and physical strength by exercising the mind and body: learn yoga, dance, gymnastics, aerobics, and group mediation alongside the instructor, Natalie Blank, a certified personal trainer, dance teacher, and CrossFit coach, who will motivate you to keep your chin up, girl!

**Course Outcomes:**

Outcomes are not available.

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**Circus Camp**

YOU 386

Step Right Up....Step Right Up...Be Amazed, Be Amused, and Be Excited to see what life is like under the Big Top! Take a turn on the tight wire? Walk on Stilts! Learn to Juggle! Explore the world of a circus performer--the tradition and the feel of being under the Big Top. Take part in a non-competitive and challenging art form that combines physical activity with cultural arts. Activities include acrobatics, juggling, improvisation, stilt walking, tight wire, and other circus experiences. Improvements in hand/eye coordination, balance, and self-confidence are just some of the benefits of this camp.

**Course Outcomes:**

Outcomes are not available.
Code Breakers

YOU 658

Calling all future coders, programmers, & designers! Learn the basics of coding languages like HTML, JavaScript, and CSS through a series of web projects and daily design challenges and be on your way to becoming the next tech star! Whether you want to be the next Mark Zuckerberg or the high school student who just made $1 million dollars for programming in his bedroom, this course has the essentials you need to begin your journey. Projects will be available on a Black Rocket website to share with friends and family. Students will work in pairs or teams for most of the program.

Course Outcomes:
Outcomes are not available.

Computer Animation with Macromedia Flash

YOU 301

This course is designed to teach students how to draw and animate using Web-based animation software, Flash CS 4. Students will learn about the tools of the trade for graphic designers and Web designers. They will gain hands-on experience using top-of-the-line software to create frame-by-frame animations and "tweened" animations with sound and special effects. Students will learn basic animation concepts and procedures used by professional animators such as easing in, pose-to-pose animating, and straight-through animation. Students will learn about character design and illustration to create their own character in an animation. Instructor: John Overman

Course Outcomes:
1. Demonstrate the ability to draw and animate using Web-based animation software.
2. Demonstrate the ability to use tools of the trade for graphic designers and web designers.
3. Demonstrate the ability to create frame-by-frame animations and "tweened" animations.
4. Review the basic animation concepts and procedures used by professionals.

Computer Animation with Macromedia Flash - Advanced

YOU 426

Continuation of the Computer Animation class using Flash. Build on the understanding of working with Flash software to build bones in characters for complex movement and for rapid production of animations. Topics covered will include scenes design and processes in animation. Learn to produce interactive media and web base interactions and animations in class.

Course Outcomes:
1. Work with Flash software to build bones in digital characters for complex movement.
2. Explore scene design and the processes in animation.
3. Produce interactive media and web base interactions and animations.
Computer Programming

YOU 443

Want to explore how to design and program your own animations or even create your own games? With this class, you will learn the basics of a scripting language so you can create your own animated characters and direct your own cartoons. Have fun while learning important mathematical and computational ideas. Learn to think creatively and work collaboratively as you create your own interactive stories, animations, games, music, and art. Instructor: David Hill

Course Outcomes:
Outcomes are not available.

Computer Programming 1

YOU 634

Course description is not available.

Course Outcomes:
Outcomes are not available.

Computer Programming 1

YOU 577

Course description is not available.

Course Outcomes:
1. Draw or import new sprites
2. Move sprites on the screen using x and y values
Use conditional statements to create branching programs
Create loops to control the flow of programs
Share projects and obtain feedback using the Scratch Website

Computer Programming 1

YOU 576

Use the MIT-developed programming language, Scratch, to investigate the foundations of computer programming. Through the creation of a variety of applications and games, you will learn essential common programming structures that can be applied to any future languages that you learn. An emphasis is placed on balancing rigor and fun, and you will have many opportunities to flex your creative muscles in the creation of your programs.

Course Outcomes:
1. Draw or import new sprites
2. Move sprites on the screen using x and y values
Use conditional statements to create branching programs
Create loops to control the flow of programs
Share projects and obtain feedback using the Scratch Website
Computer Programming 2
YOU 578

Use the programming language, Visual Basic, to create a variety of applications and games, building on the foundational tools of programming introduced in Computer Programming 1. Learn the organizational advantages to using a visual programming language, and begin to work with writing your own code rather than dragging and dropping commands as you did in Scratch. Learn to deal with the syntax errors that this new freedom creates, and move on to explore the large ‘toolbox’ that Visual Basic provides its programmers.

Course Outcomes:
- Add objects to Forms using the VB toolbox
- Set up initial properties of the objects in a form
- Alter the properties of objects through the use of event-driven code
- Create assignments, conditional statements, loops, and variables using VB code.
- Troubleshoot simple syntax errors

Computer Programming Camp for Boys and Girls
YOU 482

Find out what it takes to write a computer program through this summer camp designed to teach the fundamentals of programming in a fun environment with cool projects to try out your new programming skills. The camp will focus on Visual Basic programming language and present programming logic and problem solving, the basis of any computer programming language. Experience in Windows, on or above grade level in math!

Course Outcomes:
- Outcomes are not available.

Computer Programming Camp for Boys and Girls
YOU 483

Course description is not available.

Course Outcomes:
- Outcomes are not available.
## Computer-Aided Drafting and Design (CADD) Using Autodesk Inventor

### YOU 481

This continuing education course is designed for gifted and talented students in grades 8 - 11, and provides instruction on the basics of CAD using Autodesk Inventor software. Topics include developing 3-D solids, parts, and assemblies; drawing, editing, and refining simple objects; and working with highly complex three-dimensional, interactive models.

### Course Outcomes:

1. Practice developing 3-D solids, parts, and assemblies using software package.
2. Discover the basics of CAD as a replacement for drawing and designing with pencil and paper.
3. Practice drawing, editing, and refining simple objects.
4. Experiment with complex three dimensional, interactive models.

## Computer-Aided Drafting and Design (CADD) Using Autodesk Inventor

### YOU 695

This continuing education course is designed for gifted and talented students in grades 8 - 11, and provides instruction on the basics of CAD using Autodesk Inventor software. Topics include developing 3-D solids, parts, and assemblies; drawing, editing, and refining simple objects; and working with highly complex three-dimensional, interactive models.

### Course Outcomes:

1. Practice developing 3-D solids, parts, and assemblies using software package.
2. Discover the basics of CAD as a replacement for drawing and designing with pencil and paper.
3. Practice drawing, editing, and refining simple objects.
4. Experiment with complex three dimensional, interactive models.

## Computer-aided Drafting/Design (CADD) using Autodesk Inventor

### YOU 003

Learn to develop 3-D solids, parts, and assemblies using Autodesk Inventor. Learn the basics of CAD as a replacement for drawing and designing with pencil and paper. Start by drawing, editing, and refining simple objects, and progress to highly complex three-dimensional, interactive models. Inventor is the engineering and manufacturing software used by Montgomery County Schools for all engineering programs. Instructor: Doug White

### Course Outcomes:

1. Practice developing 3D solids, parts, and assemblies using software package.
2. Discover the basics of CAD as a replacement for drawing and designing with pencil.
3. Practice drawing, editing, and refining simple objects.
4. 
Crazy Chemwork
YOU 454

This action-packed program is bubbling over with classic experiments and crazy concoctions. Perform spectacular hands-on activities using real tools. Witness stunning demonstrations and join in inquiry-based discussions. You will learn and apply the concepts and techniques just like a real chemist. Crazy Chemworks is the perfect introduction to elementary chemistry.

Course Outcomes:
Outcomes are not available.

Create a Fictional World
YOU 103

Do you love to read and write stories? Are your favorite stories the ones that take place in "worlds" of their own? If you love science fiction and fantasy like Harry Potter, Star Wars, and Eragon, this class is for you! Go behind the scenes of some of literature's most famous fantasy/sci-fi settings, and create one of your own. Develop a "world" journal that will help you establish the rules of your own special fictional place. Design your world's geography, history, weather, plants, animals—even the people. Then just add stories! You'll do some writing, plus lots of hands-on activities like building a 3-D map, creating a diorama, and sculpting a creature or person from your world.

Course Outcomes:
Outcomes are not available.

Create It! Circuits, Light, and Motion
YOU 613

Design, prototype, and fabricate unique electrical and electromechanical toys to take home. Work alongside expert tool, and electronics skills by drawing, building, testing, and improving their designs.

Course Outcomes:
Outcomes are not available.

Creative Design and Robotics
YOU 378

The world of the future belongs to...Robots! Robotics is one of America’s fastest growing industries. Learn the fundamentals of motorized mechanisms and basic design principles in this unique class. Separate fact from fantasy by designing and building your first robot. After learning the basic principles of design, build prototypes and learn problem-solving techniques to improve how your robots function in a series of design challenges!

Course Outcomes:
Outcomes are not available.
Creative Spirit

YOU 656

Develop your creative spirit in this adventurous workshop using paint, glitter, tissue paper, crayons, and a host of other art materials. Go off the beaten path to stimulate your creativity with inventiveness. Go from realism to abstraction, paint your emotions, or reverse the rules of realism. Learn new techniques of design with mosaic tiles and collage. Sculpty, clay, and bead work will also be explored.

Course Outcomes:
Outcomes are not available.

Crime Scene and Chemistry

YOU 115

Mad Science introduces you to life in the form of cells and organs and to how the science behind life can help you solve a crime! Discover the secrets behind batteries and design marshmallow molecules! Conduct electricity and power a Mad Science whirligig. Experience blood pumping through the heart and air moving through the lungs. Use ooey-gooey ingredients to build a model cell and use your own traits to decode and decipher your DNA.

Course Outcomes:
Outcomes are not available.

Crime Scene and Chemistry

YOU 679

Mad Science introduces you to life in the form of cells and organs and how the science behind life can help you solve a crime! Discover the secrets behind batteries and design marshmallow molecules! Conduct electricity and power a Mad Science whirligig. Experience blood pumping through the heart and air moving through the lungs. Use ooey-gooey ingredients to build a model cell and use your own traits to decode and decipher your DNA.

Course Outcomes:
Outcomes are not available.

CSI - Crime Scene Investigation

YOU 664

You will be a super science sleuth. Have fun learning about forensics, crime scene investigations, and crime lab chemistry as you perform as many as 15 different experiments designed to show you just how those tricky cases are solved. Search for the evidence, gather clues, and discover how science can help solve a mystery. You will dust for fingerprints, analyze handwriting, test for blood type using simulated blood, examine hair and clothing fibers, practice chemistry to identify mystery substances, and much more.

Course Outcomes:
Outcomes are not available.
Cultural Explorers: Arabic Language and Arts

YOU 727

Explore the Arab world and learn about its language and culture through arts, fun and play. Get your hands, feet and brain busy with Arabic calligraphy, geometric art, embroidery, Arabic music, dabke dance and more. Fun, interactive games and hands-on activities will guide you through learning some Arabic alphabets and greetings, writing your name in calligraphy, and discovering your favorite Arab musical instrument.

Course Outcomes:

Outcomes are not available.

Debate: Conversation, Persuasion, Competition

YOU 320

This class will teach the proper rules for debating and participating in Socratic Seminars. Through research and practice you will learn how to effectively prepare for a debate, how to clearly state your ideas, and develop a persuasive speech. Complete some writings, watch some videos and learn to identify various types of speeches and debates. Students will also learn the techniques for speeches used by the President of the United States. By the end of class, you will make a video of yourself making a speech or participating in a debate.

Course Outcomes:

1. Examine the rules of debating and participating in Socratic Seminars.
2. Prepare a debate using research and effective practice.
3. State ideas clearly to develop persuasive speeches.
4. Create a video of yourself participating in a debate or making a speech.

Debate: Conversation, Persuasion, Competition

YOU 321

Are you outspoken? Do you like to debate and persuade others to agree with your opinion? If the answer is yes, then this class is for you! Come join us and learn the proper rules for debating and participating in Socratic Seminars. Through research and practice you will learn how to effectively prepare for a debate, how to clearly state your ideas, and develop a persuasive speech. Complete some writings, watch some videos and learn to identify various types of speeches and debates. Even learn the techniques for speeches used by the President of the United States. By the end of class, you will make a video of yourself making a speech or participating in a debate.

Course Outcomes:

1. Examine the rules of debating and participating in Socratic Seminars.
2. Prepare a debate using research and effective practice.
3. State ideas clearly to develop persuasive speeches.
4. Create a video of yourself participating in a debate or making a speech.
Digital Art with Photoshop

YOU 484

Learn painting and drawing techniques in Photoshop. Master digital image manipulations, retouching, applications of filters, and picture preparation for the web.

Course Outcomes:
Outcomes are not available.

Digital Fab Lab Camp

YOU 739

This continuing education course is designed for gifted and talented middle and high school students, and provides the students the opportunity to explore design, program, and create small projects using the state-of-the-art machine tools. Topics include: exploring 3-D printing, laser cutting, vinyl cutting, and woodworking; learning proper safety procedures for using tools to fabricate; and using SolidWorks, CorelDraw, and Inkscape software to create objects of choice in different materials like wood, acrylics, vinyl, and plastics.

Course Outcomes:
1. Use machine tools in the FAB LAB to explore their printing, laser cutting, vinyl cutting and woodworking capabilities.
2. Practice the proper and safe methods for using fabrication tools.
3. Use software like SolidWorks, CoralDraw, and Inkscape to program selected objects.
4. Create small objects using different materials, like wood, acrylics, vinyl, and plastic.

Digital Game Design and Creation 1

YOU 181

This course is designed to teach students how to design their own board game and strategy game using Gamemaker software. Students will uncover why award-winning games are successful, and how the design is taken from concept to final product.

Course Outcomes:
1. Design a board game and a strategy game.
2. Identify why award winning games are successful.
3. Develop and design a game from concept to final product.
4. Create and test the basic elements of the game.
Digital Game Design and Creation 2
YOU 696
This continuing education course is designed for gifted and talented students in grades 6 - 8, and provides students an opportunity to explore, design, and develop, and create game concepts/strategies and create random/complex actions. Topics include: investigating background and sprite animations, using and testing variables and basic codes, and developing game concepts and strategies.

Course Outcomes:
1. Use background and sprite animations.
2. Design game strategies using variables and basic codes.
3. Develop game concepts/strategies and random/complex actions.
4. Create and test the elements of your game.

Digital Game Design and Creation 2
YOU 182
This course is designed for students who have taken or are currently enrolled in Digital Game Design and Creation or have a working knowledge of how the software functions. Students will investigate a variety of topics including background and sprite animations, variables and basic code, and how to develop game concepts and strategies and random/complex actions.

Course Outcomes:
1. Employ background and sprite animations.
2. Design game strategies using variables and basic codes.
3. Develop game concepts/strategies and random/complex actions.
4. Create and test the elements of your game.

Digital Graphics Arts with Adobe Photoshop and Illustrator
YOU 697
This continuing education course is designed for gifted and talented students in grades 6 - 8, and provides students with the opportunity to explore, use, and create modern graphics, illustrations, and commercial/advertising art for the web. Topics include: creating prints for the web, using imagining tools, and importing and exporting files from devices like scanners and cameras.

Course Outcomes:
1. Use contemporary digital art techniques for creating prints for the web.
2. Create modern graphics, illustrations, and commercial/advertising art using imagining tools and processes.
3. Import and export files from devices like scanners and cameras.
4. Create original images.
Digital Media Arts/Photoshop and Illustrator

**YOU 305**

This course is designed to explore contemporary digital art techniques for creating prints and art for the Web. Students will learn to use imaging tools and processes to create modern portraits, illustrations, and commercial/advertising art. An introduction to Adobe PhotoShop CS4 and Adobe Illustrator CS4 will include layers, tools and file formats. Students will learn to import and export files from devices like scanners and cameras. They will also produce a variety of unique works of art.

**Course Outcomes:**

1. Explain contemporary digital art techniques for creating prints and art for the web.
2. Demonstrate the ability to use imaging tools and processes to create modern portraits, illustrations, and commercial/advertising art.
3. Demonstrate the ability to import files from devices like scanners and cameras.
4. Demonstrate the ability to export files to printers and other file devices.

Digital Media Arts/Photoshop and Illustrator

**YOU 391**

Explore contemporary digital art techniques for creating prints and art for the Web. Learn to use imaging tools and processes to create modern portraits, illustrations, and commercial/advertising art. An introduction to Adobe PhotoShop CS4 and Adobe Illustrator CS4 will include layers, tools and file formats. Learn to import and export files from devices like scanners and cameras. Produce a variety of unique works of art.

**Course Outcomes:**

1. Explain contemporary digital art techniques for creating prints and art for the web.
2. Demonstrate the ability to use imaging tools and processes to create modern portraits, illustrations, and commercial/advertising art.
3. Demonstrate the ability to import files from devices like scanners and cameras.
4. Demonstrate the ability to export files to printers and other file devices.

Digital Photo Editing

**YOU 686**

Learn how to use PhotoShop for digital photo editing. Learn to modify and correct your photos using Photoshop tools like Eyedropper, blur and spot healing brush, etc. to edit digital images. Topics will include use of tools, layers, filters, photo color correction, and file formats. Work on several projects creating and editing images.

**Course Outcomes:**

Outcomes are not available.
### Dive into Summer Writing

**YOU 682**

A fun filled writing camp that will help increase your vocabulary and aid in composition writing. Learn basic grammar, write in daily journals, create a book review and play language arts hands-on games.

**Course Outcomes:**
Outcomes are not available.

### Drawing for the Drawer: Connecting the Hand to the Brain

**YOU 574**

Drawing is a universal form of communication. In this class we’ll discuss how the physiology of the human eye/brain shapes our perception. Learn how binocular vision, depth of field, and rod and cone distribution all influence how we see the world. Find out how saccadic movement of the eye—the quick restless scanning from point to point—allows us to search for the things that are most useful or meaningful and filter out distractions. Study the fundamentals of the many different dialects there are in drawing from charcoal to pen and ink, from drawing life to image reproduction.

**Course Outcomes:**
Discover how binocular vision, depth of field, and rod and cone distribution influence how we see.
Explore saccadic eye movement and how it allows us to search for useful and meaningful things in our vision.
Explore the fundamentals of different dialects in drawing from charcoal to pen and ink, from drawing life to image reproduction.

### Drawing My Personal Super Hero

**YOU 687**

Learn how to develop your own personal super hero. Learn to develop an atmospheric sensitivity that will make your character of choice enter the story environment seamlessly. Using line weight and full value range, learn how to create a difference in the texture of fabrics for your desired character and the items used by your characters. Use advanced tools of illustration such as microns drafting pencils prisma color markers and many other tools in the development of your personal heroes and villains.

**Course Outcomes:**
Outcomes are not available.
Earth Space and Beyond

YOU 113

Mad Science invites you to decipher the world around you. As young astronauts, we will explore the mysteries of the solar system. How do astronauts live and work in space? The sun, moon and the stars are only a few of the things that must be dealt with on this Mad Science space mission! Use Morse code to send secret messages to your friends. Learn the basics of water pollution, acid rain and the benefits of solar energy. Recycle your own garbage to make your very own paper to take home!

**Course Outcomes:**

Outcomes are not available.

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Earth, Space, and Beyond

YOU 680

Mad Science invites you to decipher the world around you. As a young astronauts, you will explore the mysteries of the solar system. How do astronauts live and work in space? The sun, moon, and stars are only a few of the things that must be dealt with on this Mad Science space mission! Use Morse code to send secret messages to your friends. Learn the basics of water pollution, acid rain, and the benefits of solar energy. Recycle your own garbage to make your very own paper to take home! Learn what football players, scientists, and ballet dancers have in common.

**Course Outcomes:**

Outcomes are not available.

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Electronic Lab

YOU 744

Thirty(30) different projects and experiments are built with your own electronic kit to take home. Science project ideas will come alive as you build 30 projects while working with Electronic Circuits. The electronics kit is reusable. Have fun designing your own projects once you've built all 30. Proceed at your own pace. Receive an 80 page manual, 1 solderless circuit board, 12 resistors, 2 capacitors, 2 light-emitting diodes, 2 transistors, 1 battery snap, 1 diode, 1 speaker, 1 timer, 1 photocell, 1 rectifier, 1 potentiometer, and 1 switch. Learn the ins and outs of how they work.

**Course Outcomes:**

Outcomes are not available.

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Engineering FUNdamentals Using LEGO®

YOU 698

Power up your engineering skills with Play-Well TEKnologies and tens of thousands of LEGOs! Apply real-world concepts in physics, engineering, and architecture through engineer-designed projects such as arch bridges, skyscrapers, motorized cars, and the Battletrack! Design and build as never before, and explore your craziest ideas in a supportive environment. An experienced instructor will challenge new and returning students to engineer at the next level.

**Course Outcomes:**

Outcomes are not available.
Engineering FUNdamentals Using LEGO®

YOU 640

Power up your engineering skills with Play-Well TEKnologies and tens of thousands of LEGO®s! Apply real-world concepts in physics, engineering, and architecture through engineer-designed projects such as arch bridges, skyscrapers, motorized cars, and the Battletrack! Design and build as never before, and explore your craziest ideas in a supportive environment. An experienced instructor will challenge new and returning students to engineer at the next level.

**Course Outcomes:**
Outcomes are not available.

Engineering: An Introduction

YOU 389

Invention is the process of turning ideas and imagination into devices and systems. Innovation is the process of modifying an existing product or system to improve it. Learn to design, construct, test and evaluate a model. Refine and modify your original ideas to perfect the model. Explore the steps involved in design and experiment with the different sequences and repeats used to create design.

**Course Outcomes:**
1. Design, construct, test, and evaluate a model.
2. Refine and modify ideas to perfect model.
3. Explore the steps involved in design.
4. Experiment with the different sequences and repeats used to create design.

Equity and Equality Challenge

YOU 708

This continuing education course was designed for gifted and talented students in grades 9 - 12, and provides them an opportunity to explore the meanings of and hold discussions on equity vs. Equality. Topics include: the examination of the historical, social, economic, and cultural issues related to equity and equality. Students will also discuss vocabulary, write observations, and examine film and other media.

**Course Outcomes:**
Examine the historical and social aspects of equity and equality.
Discuss vocabulary and definitions.
Write observations and examine film and other media.
Discuss economic and cultural issues of the day.
Etiquette and Character Education Enrichment

YOU 731

The middle grades can be a time of awkwardness and curiosity. This hands-on, fun and exciting program gives girls the information and practice needed to push through these years and be prepared for the events high school will bring. Girls will learn how to greet and introduce people, properly shake hands, maintain confident posture, dress appropriately for various occasions, show respect and courtesy to other people, communicate appropriately via phone, text, and social media, be a good sport, improve dining skills, and more!

Course Outcomes:
Outcomes are not available.

Etiquette and Manners Are Cool!

YOU 589

Etiquette and manners are cool! Join this class for exciting, hands-on experiences that help you to become self-confident and build leadership qualities. Activities include topics on Social Etiquette: making a WOW impression and building self-confidence in social settings; Communication Skills: using tools for effective communication, including learning to make telephone/cell phone calls and proper texting etiquette; Table Manners: learning the proper skills to feel comfortable in any dining situation, whether at home or away; and much more. You’ll receive a certificate of completion and a workbook for additional practice at home.

Course Outcomes:
Outcomes are not available.

Eureka! The Inventor’s Camp

YOU 450

Creative Contraption Warning! This is a camp designed for you—the Inventor! Overcome a series of challenges using basic materials, simple machines, tips from world famous inventors and the most important thing of all - your mind. With a little bit of ingenuity you’ll construct catapults and forts and then lay siege, fabricate a winning Egg Drop design, construct a dancing robot and assemble a working light saber to take home. While Thomas Edison said invention is 10% inspiration and 90% perspiration, this camp is 100% fun!

Course Outcomes:
Outcomes are not available.

Experience the Smithsonian

YOU 524

Explore the heart and art of Washington D.C. Travel by subway to the American Art Museum, the Hirshorn, the National Gallery of Art, and many more. We’ll talk about color, contrast, shape, texture, and themes and take advantage of educational programs. Please bring your lunch and your walking shoes as we will visit two museums a day!

Course Outcomes:
Outcomes are not available.
Experimentamania
YOU 376

Experimentamania is a cornucopia of experiments! Uncover the vital role that science plays in detective work, examine the science behind popular toys, and get a buzz out of the amazing world of insects! As a Mad Scientist, explore Earth science, weather phenomena, and experiment with some kitchen chemistry! Learn to build your own Mad Science machine and create your very own short, animated cartoon!

Course Outcomes:
Outcomes are not available.

Exploration around the World
YOU 600

It’s time to travel around the world so pack your bags, campers! In this camp you will get the opportunity to learn more about geography and various different cultures around the world. You create your own passport and document your entire journey as you explore countries all over the globe!

Course Outcomes:
Outcomes are not available.

Explore the Magic of Reading, Writing, and Technology
YOU 074

Authors of children's books often include in their stories hidden meanings, a mystery, amazing facts, or an interesting effect through art. Come explore these fascinating books by a variety of authors including Chris Van Alsburg, Eric Carle, and Mary Pope Osborne. Improve your reading and writing skills while adding a touch of technology to enhance your author study. Discover which author writes adventure stories, about dreams, games, and more!

Course Outcomes:
Outcomes are not available.

Explore the Magic of Reading, Writing, and Technology
YOU 076

Authors of children's books often include in their stories hidden meanings, a mystery, amazing facts, or an interesting effect through art. Come explore these fascinating books by a variety of authors including Chris Van Alsburg, Eric Carle, and Mary Pope Osborne. Improve your reading and writing skills while adding a touch of technology to enhance your author study. Discover which author writes adventure stories, about dreams, games, and more!

Course Outcomes:
Outcomes are not available.
<table>
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<tr>
<th>Course Title</th>
<th>Course Code</th>
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<tbody>
<tr>
<td>Explore the Magic of Reading, Writing, and Technology</td>
<td>YOU 689</td>
</tr>
<tr>
<td>Explore Timeline Writing</td>
<td>YOU 477</td>
</tr>
<tr>
<td>Fiction Factory</td>
<td>YOU 369</td>
</tr>
<tr>
<td>Financial Fitne$$ for Teens</td>
<td>YOU 271</td>
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</tbody>
</table>

**Explore the Magic of Reading, Writing, and Technology**

YOU 689

Authors of children’s books often include hidden meanings, a mystery, amazing facts, or an interesting effect through art. Come explore these fascinating books by a variety of authors including Chris Van Alsburg, Eric Carle, and Mary Pope Osborne. Improve your reading and writing skills while adding a touch of technology to enhance your author study. Plus create your own 3-D board game based off your favorite book!

**Course Outcomes:**

Outcomes are not available.

**Explore Timeline Writing**

YOU 477

Have you ever been trapped, lost in your own thoughts, while trying to put your ideas on paper? Are you an aspiring writer, designer, musician, computer specialist, artist, or even scientist? Join us for an exhilarating, hands-on experience. Learn how to apply a unique shorthand method for organizing, analyzing, designing, and implementing creative or scientific methods. As an added bonus, design your own project using the skills you learned. Come prepared to create a project with a topic area or interesting idea in mind that will test your own smarts.

**Course Outcomes:**

Outcomes are not available.

**Fiction Factory**

YOU 369

Course description is not available.

**Course Outcomes:**

Outcomes are not available.

**Financial Fitne$$ for Teens**

YOU 271

This is a kid-friendly course to get young students to critically thinking about money. Students will learn to make financial goals and persue them. They will discover how to save and invest, and how banks work. This program meets State and National personal finance standards.

**Course Outcomes:**

1. Demonstrate an understanding of how to make financial goals and how to persue them.
2. Discuss how to save and invest money.
3. Examine how banks work.
4. Explain debt and incentives and what they mean.
<table>
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<tr>
<th>Course Description</th>
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<th>Course Outcomes</th>
<th>Outcomes are not available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flight Academy</td>
<td>YOU 681</td>
<td>Calling all pilots! As a Mad Science flight cadet in training, you will discover how airplanes fly. Test your airplane’s performance in a wind tunnel. Build your own kite, stunt plane and model rocket. Ride the air on a Hovercraft. Discover how hot air balloons, blimps and parachutes work.</td>
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<tr>
<td>Flying Machine Construction Lab</td>
<td>YOU 671</td>
<td>Design, build, and launch zipline racers, prop copters, parachutes, and high powered air rockets! Use real hands-on engineering tools and materials to take home four unique, high quality flying machines.</td>
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<tr>
<td>Follow Me Robot</td>
<td>YOU 665</td>
<td>Build and take home a robot that has four built-in microphones. Your robot will detect the sound source and will move and turn accordingly. It flashes and plays Do-Re-Me. Make it move the way you want it to move. It is so smart, it will even move in its own routine if it does not get a signal in 1 minute. It goes to sleep if you do not issue any commands in 90 seconds; however, you can wake it up. Learn about the different gears and sensors and build other robots working in groups. Join in our Sumo wrestling and obstacle course events.</td>
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<tr>
<td>French is Fun</td>
<td>YOU 713</td>
<td>A fun, laughter filled program designed to enhance foreign language interests and skills. Find the fun in the French you are learning in school. Each day, you'll play games and do various camp activities (music, art; sports games; French and Francophone games; scavenger hunts; skits) that allow you to use the French you know, learn from scratch, or supplement what you already know. Choose a project (building skits, writing rap music, researching your interests on the internet). One or two projects will be chosen by the class, according to interests. Mixed levels and ages allows you to learn to work in groups and to share your strengths.</td>
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</tbody>
</table>
FUNdamentals of Biotechnology

YOU 566

This continuing education course is designed for students, grades 7 - 8. In FUNdamentals of Biotechnology you can explore the world of Science and Technology. Spend a week using the latest bioscience laboratory techniques taught by experienced scientists. Take field trips to local Maryland science organizations and leading companies and talk to real-life scientists that made a living out of biotechnology. Find out about a wide variety of career choices and explore ways that Maryland organizations are researching and developing drugs, vaccines and diagnostics. In FUNdamentals of Biotechnology you can explore the world of Science and Technology. Spend a week using the latest bioscience laboratory techniques taught by experienced scientists. Take field trips to local Maryland science organizations and leading companies and talk to real-life scientists that made a living out of biotechnology. Find out about a wide variety of career choices and explore ways that Maryland organizations are researching and developing drugs, vaccines and diagnostics. Experience what biotechnology is all about first-hand!

Course Outcomes:

Use the latest bioscience laboratory techniques and equipment to explore the fundamentals of biotechnology.

Take field trips to local Maryland science organizations and leading companies to talk to real-life scientists about biotechnology.

Examine a variety of career choices and explore the techniques Maryland organizations use to research and develop drugs, vaccines and diagnostics.

Funky Forces and More

YOU 377

Course description is not available.

Course Outcomes:

Outcomes are not available.

Future Einsteins

YOU 602

It’s time to get those brain cells flowing again! Our Future Einsteins camp will incorporate fun math and science activities/challenges to teach you how to better apply practical skills and concepts to everyday matters. At the end, you might even invent the next light bulb!

Course Outcomes:

Outcomes are not available.
Future Fab
YOU 485

Don’t miss this one-of-a-kind maker offering, combining tangible computing, traditional crafts, and programming. Combine bits and atoms in two projects—one based on light and another based on movement. Work alongside experienced engineers and artists to create unique, functional, and whimsical electronic objects using programmable microcontrollers, freeware, sensors, motors, LED’s, wood, plastic, and real hand tools. No experience needed—perfect for young artists who want to experiment with digital design, or emerging engineers who want to express their creativity or go beyond plastic brick robotics! All tools and materials provided.

Course Outcomes:
Outcomes are not available.

Geometric Animals
YOU 709

Join us to explore methods of creating an animal collage. Practice drawing techniques with a variety of pencils, marker, charcoal pencil, colored pencils, and conte.

Course Outcomes:
Outcomes are not available.

Geometry
YOU 184

This class is designed for students who will take geometry or honors geometry in the upcoming school year. Topics covered include properties of two- and three-dimensional geometry shapes and development of mathematical arguments about geometric relationships.

Course Outcomes:
1. Discuss the basic concepts of Elementary Geometry.
2. Research geometric relations and properties.
3. Solve geometric proofs.
4. Solve problems relating trigonometry.

Germantown Baseball Clinic
YOU 053

Take this opportunity to work on baseball skills and get ready for spring. The players and coaches of the 2009 Gyrphon's ranked #9 in the country last year, will provide instruction in hitting, pitching, and catching. The clinic will be held in the Montgomery College Germantown indoor facility which includes 2 batting cages, pitching mounds, and plenty of space for infield and outfield work.

Course Outcomes:
Outcomes are not available.
Montgomery College, Workforce Development & Continuing Education
Noncredit Course Descriptions and Outcomes
Youth Programs

Germantown Baseball Clinic
YOU 548

If you are a coach of a baseball team and you want to get a jump start on your season by practicing as a team, then this clinic is for you. Take this opportunity to work on baseball skills and get ready for spring. The players and coaches of the 2013 Gyrphon baseball team, ranked #9 in the country last year, will provide instruction in hitting, pitching, fielding, and throwing. The clinic will be held in the Montgomery College Germantown indoor facility which includes 2 batting cages, pitching mounds, and plenty of space for infield and outfield work.

Course Outcomes:
Outcomes are not available.

Germantown Baseball Summer Camp
YOU 089

The Montgomery College Germantown Baseball Camp stresses the fundamentals of hitting, fielding, pitching, throwing, base running, and all of the important aspects of the game. All levels of abilities are welcome. Teamwork and Sportsmanship will be stressed. Campers will be placed with their appropriate level of play. Come join us at Gryphon Park for an exciting week of baseball, games, swimming, and fun.

Course Outcomes:
Outcomes are not available.

Germantown Baseball Summer Camp
YOU 086

The Montgomery College Germantown Baseball Camp stresses the fundamentals of hitting, fielding, pitching, throwing, base running, and all of the important aspects of the game. All levels of abilities are welcome. Teamwork and Sportsmanship will be stressed. Campers will be placed with their appropriate level of play. Come join us at Gryphon Park for an exciting week of baseball, games, swimming, and fun.

Course Outcomes:
Outcomes are not available.

Germantown Baseball Summer Camp
YOU 087

The Montgomery College Germantown Baseball Camp stresses the fundamentals of hitting, fielding, pitching, throwing, base running, and all of the important aspects of the game. All levels of abilities are welcome. Teamwork and Sportsmanship will be stressed. Campers will be placed with their appropriate level of play. Come join us at Gryphon Park for an exciting week of baseball, games, swimming, and fun.

Course Outcomes:
Outcomes are not available.
### Germantown Baseball Summer Camp

**YOU 088**

The Montgomery College Germantown Baseball Camp stresses the fundamentals of hitting, fielding, pitching, throwing, base running, and all of the important aspects of the game. All levels of abilities are welcome. Teamwork and Sportsmanship will be stressed. Campers will be placed with their appropriate level of play. Come join us at Gryphon Park for an exciting week of baseball, games, swimming, and fun.

**Course Outcomes:**

Outcomes are not available.

### Germantown Baseball Winter Clinic

**YOU 446**

Take this opportunity to work on baseball skills and get ready for spring. The players and coaches of the 2012 Gyrphon baseball team -- who ranked #9 in the country last year -- will provide instruction in hitting, pitching, fielding, and throwing. The clinic will be held in the Montgomery College Germantown indoor facility which includes 2 batting cages, pitching mounds, and plenty of space for infield and outfield work.

**Course Outcomes:**

Outcomes are not available.

### Germantown Basketball Skills Camp

**YOU 617**

The Germantown Basketball Skills camp is for boys and girls, from beginner to advanced varsity high school athletes, who wish to work on the fundamental skills of the game of basketball. Shooting, ball handling, defense, and conditioning will all be covered each day to help develop the skills needed to enjoy the game of basketball at any level.

**Course Outcomes:**

Outcomes are not available.
### Germantown Basketball Skills Camp

**YOU 616**

The Germantown Basketball Skills camp is for boys and girls, from beginner to advanced varsity high school athletes, who wish to work on the fundamental skills of the game of basketball. Shooting, ball handling, defense, and conditioning will all be covered each day to help develop the skills needed to enjoy the game of basketball at any level.

**Course Outcomes:**
Outcomes are not available.

### Getting Ready for Kindergarten

**YOU 229**

Is your child entering kindergarten in the fall? Want them to get a head start on learning to interact and socialize with other children in an educational classroom environment? We will focus on reading, writing, and mathematical skills which are commonly learned in the kindergarten classroom. Join us to have fun while preparing to go to elementary school.

**Course Outcomes:**
Outcomes are not available.

### Global United Nations

**YOU 603**

We know how important teamwork and collaboration is! That is why in this camp you will learn how campers can bring their own unique skills and talents together to solve challenges and conflicts. You will practice working together, leading peers, group communication, and cooperating with one another to achieve larger goals. On the last day of United Nation’s camp, you will be faced with a camp-wide “challenge” in which all campers will need to work together to find a solution!

**Course Outcomes:**
Outcomes are not available.

### Go 2 College

**YOU 623**

Course description is not available.

**Course Outcomes:**
Outcomes are not available.

### Go 2 College

**YOU 745**

Course description is not available.

**Course Outcomes:**
Outcomes are not available.
GURL Power

YOU 444

Explore the wonderful world of the Internet. Create and publish a website with your signature personality! Design with pro tools like Adobe Dreamweaver® and Adobe Photoshop®, as well as Wacom® pen tablets. Make your Web site come alive with animations created in the powerful motion graphics world of Adobe Flash®. Create stunning, high-resolution 3D game environments and characters. Using the intuitive tool set featured in Autodesk Maya®, the software package used in top game development and film studios, build your own 3D models and characters, and receive an introduction to character animation.

Course Outcomes:

Outcomes are not available.

High School: What’s Next

YOU 605

Who am I? What Do I Want? How Do I Get It? The answers to these questions can at times seem very simple and at others be a challenge. High school students who know who they are becoming, and what they want in life, have a better chance of achieving their idea of success and living a healthy, balanced lifestyle. In this course, you will explore your skills, interests, values, and the world of work to make informed education, career, and life decisions. Along the way, you’ll develop financial literacy skills and time/stress management techniques that will help you navigate your way through high school in preparation for what’s next.

Course Outcomes:

Outcomes are not available.

Hyper Peppy Robotics - A look into the past and the future

YOU 667

Build and take home your own Hyper Peppy Robot. It is sound activated, so just clap your hands to get it moving. Your robot is fast and very sensitive to touch/sound. It will automatically goes in reverse and turns left whenever it comes in contact with an object. See first-hand how easy to assemble the mechanical drive system is and to use the many gears, circuit board, and microphone. Build other robots as a part of a small group, and become a part of robotic technology.

Course Outcomes:

Outcomes are not available.
Inside and Outside of Antibodies

YOU 699

Antibodies are your main defense against infection! Find out how antibodies work and how they are used to make tomorrow's medicines and the most sophisticated detection systems in the world today. Work in modern biotechnology laboratories to make and test your own antibodies that can be detected with a flash of light. Meet scientists who work with antibodies and find out from them why antibodies are the future of medicine.

Course Outcomes:
Outcomes are not available.

Intensive Creative Writing Workshop

YOU 057

This exciting class is for kids who are self motivated writers. The course will not focus on a particular form of writing, but rather on developing and pursuing creative and original ideas for writing in any genre the writers are interested in. The young writers will work on developing pieces of interest to them during computer time. Writing games and exercises will focus on specific issues. Each day will include a group critique that looks at the specific issues of what they are working on. Class stresses learning to talk about writing like writers and to read like writers. Discussions of structure, rhythm of language, good word choice, imagery, ways of communicating, where ideas come from, the publishing world and how it works will all be included during the class.

Course Outcomes:
1. Develop and create original writings in any genre of interested.
2. Develop critiques to examine specific writing issues.
3. Discuss structure, rhythm of language, good word choice, imagery, ways of communicating, where ideas come fr

Introduction to Architectural Design

YOU 294

This course is designed to explore the design and construction of residential and commercial buildings. Students will review the historical aspects of civil engineering and architecture as well as current innovations being made in the industry today. This course is math- and science-based, and aligns with the new federal education initiative of promoting STEM in today's classrooms. This is a project based course which allows students to become problem solvers and learn from each others' ideas.

Course Outcomes:
1. Determine the principles and processes of the design and construction of residential and commercial buildings.
2. Review the basic concepts of building design and spatial analysis.
3. Examine the historical aspect of civil engineering and architecture.
4. Examine the current innovations being made in the architecture industry today.
### Introduction to Sculpting and Plaster Casting

**YOU 700**

Clay modeling, Plaster of Paris castings, and an introduction to traditional sculpting techniques will be used to create relief sculptures and portraits in this sculpting class. Learn the fundamentals of creating an armature, sculpting a portrait, and working in relief to create realistic art work. Traditional techniques of creating waste molds for reproducing clay works into plaster casting will be covered.

**Course Outcomes:**

Outcomes are not available.

### Introduction to Sewing

**YOU 636**

Course description is not available.

**Course Outcomes:**

Outcomes are not available.

### Introduction to Sewing

**YOU 716**

Learn how to use a sewing machine in this intensive 5-day camp. Learn to sew some basic yet fun projects, and how to make some essential hand-stitches. Also learn about different fibers and materials, how to use a pattern, and other fundamental sewing skills. All materials and machines will be provided.

**Course Outcomes:**

Outcomes are not available.

### Introductory Theater

**YOU 701**

Have you ever been to a movie and thought: I want to act! Or have you ever wanted to write? Well here is your chance! Introductory Theater is designed to teach you basic acting techniques. Join us to learn basic skills related to acting and playwriting—including voice, movement, characterization, and improvisation techniques. Learn how to work as an ensemble as you perform in your very own play!

**Course Outcomes:**

Outcomes are not available.
Inventor’s Workshop
YOU 606

Let’s get our creativity flowing during this camp! Inventor’s Workshop teaches you the importance of “Going Green” while learning how to re-use and invent in an environmentally friendly way. Through the week, you will be provided with recyclable materials and supplies with which to build and create fun arts and craft projects to bring home!

Course Outcomes:
Outcomes are not available.

i-Rock: Create Digital Music, Video, Songs, and Podcasts
YOU 473

Rock, rap, hip-hop, country...everyone loves to listen to their favorite songs, but until now only a few could create them. With the digital revolution everyone can rock out even if you have never played an instrument! Create songs, podcasts, or music videos using tools like Garage Band and other mass media software, explore the basics of song composition, editing tracks, and create a music video. Student created songs, music video, and podcasts will be hosted on the Black Rocket website to share with friends and family.

Course Outcomes:
Outcomes are not available.

It’s Up for Debate
YOU 517

Learn the many skills and procedures for holding an orderly and lively debate. Learn to conduct research that will help you to present an informed argument. Learn how to properly support and defend a point of view. View an argument from all sides, not merely from a single perspective. Practice public speaking and learn to work successfully in a group environment.

Course Outcomes:
Outcomes are not available.

It’s Up for Debate
YOU 590

This continuing education course is designed for students in grades 6 - 8 and provides them with skills and procedures for holding an orderly and lively debate. Students learn to conduct research that will help them present an informed argument. They also learn how to properly support and defend a point of view, and view an argument from all sides, not merely from a single perspective. Students practice public speaking and learn to work successfully in a group environment.

Course Outcomes:
Explore the skills and procedures for holding an orderly and lively debate.
Conduct research to help you to present an informed argument, and support and defend a point of view properly.
Examine an argument from all sides, not merely from a single perspective.
Practice public speaking and work successfully in a group environment.
JAMZ Basketball Camp
YOU 525
The Montgomery College JAMZ Basketball Camp stresses the fundamentals of all the important aspects of the game: speed, agility, footwork, conditioning, offensive and defensive ball handling, shooting, passing, and dribbling. All levels of abilities are welcome. Preparation, dedication, hard work, teamwork, and sportsmanship will be stressed. Come join us for an exciting week of basketball, games, and fun.

Course Outcomes:
Outcomes are not available.

Java Programming Introduction
YOU 737
This Continuing Education course is designed for Gifted and Talented students in grades 9-12, and provides them an opportunity to learn Java programming language. Topics include: Learn Object Oriented Programming (OOP) essentials and use Java’s Software Development Kit (JDK), develop Graphical User Interface (GUI) web applications, examine data types, operators, loops, classes, objects, methods, arrays, and class inheritance.

Course Outcomes:
1. Write, code, trouble-shoot, test, and run simple programs using Java.
2. Apply Object-Oriented Programming (OOP) basics - Class Inheritance, Polymorphism, and Encapsulation.
3. Solve problems using structured computer methods.
4. Apply basic programming concepts to problem solving.
5. Apply variables, math operators, strings, lists, decision methods such as if-else, loops, functions, classes and objects in Java programs.

Jimmy Potter’s Workshop
YOU 657
This is a pottery class that offers an innovative approach to arts through the craft of ceramics. Explore your creativity while learning the basics of clay through hand building. This course enhances many lifelong skills, such as increasing your focus and your attention to detail, improving your creative problem solving skills, instilling a sense and pride of accomplishment, and increasing self confidence.

Course Outcomes:
Outcomes are not available.
Youth Programs

Journalism and Advertising in the Digital Media World
YOU 420
Write two news stories - one a “real” news story and the other in tabloid style -- and create your own advertising campaign! Learn to evaluate and analyze the elements of news, leads, style, and structure of news stories. Lay out your story visually in Microsoft Publisher. Explore the elements of advertising, including the use of wording, persuasion techniques, and visual design. Finally create an advertising campaign around your own product -- write a marketing plan, create a magazine advertisement in Microsoft Publisher, and write a T-script for a television commercial. Don't miss the excitement of journalism and advertising in the Digital World!

Course Outcomes:
1. Write two original stories - one in "real" news format and the other in tabloid style.
2. Explore advertising elements like the use of wording, persuasion techniques, and visual design.
3. Evaluate and analyze the elements of news, leads, style, and structure.
4. Create your own advertising campaign around a product by writing a marketing plan, creating a magazine advertisement, and writing a T-script for a television commercial.

Journalism and Advertising in the Digital Media World
YOU 419
Write two news stories - one a “real” news story and the other in tabloid style -- and create your own advertising campaign! Learn to evaluate and analyze the elements of news, leads, style, and structure of news stories. Lay out your story visually in Microsoft Publisher. Explore the elements of advertising, including the use of wording, persuasion techniques, and visual design. Finally create an advertising campaign around your own product -- write a marketing plan, create a magazine advertisement in Microsoft Publisher, and write a T-script for a television commercial. Don't miss the excitement of journalism and advertising in the Digital World!

Course Outcomes:
1. Write two original stories - one in "real" news format and the other in tabloid style.
2. Explore advertising elements like the use of wording, persuasion techniques, and visual design.
3. Evaluate and analyze the elements of news, leads, style, and structure.
4. Create your own advertising campaign around a product by writing a marketing plan, creating a magazine advertisement, and writing a T-script for a television commercial.

Joy of Art: A Medieval Fantasy
YOU 405
Course description is not available.

Course Outcomes:
Outcomes are not available.
### Joy of Art: American Gothic - the Art of Rural America

**YOU 501**

Explore the richness of the American tradition of rural art, ranging from Grandma Moses to Andrew Wyeth to Grant Wood. We will create our own expressions of life in the country, on the farm, and in the forest. Instructors: Anne LeVeque and Nina Russell

**Course Outcomes:**
Outcomes are not available.

### Joy of Art: Art and Animals - Australia, New Zealand, and Antarctica

**YOU 585**

The animals of the dry Outback, the green hills of Tasmania, the mountains of New Zealand, and the icy coasts of Antarctica will be our inspiration as we explore the exciting wildlife of the southernmost parts of our planet through collage, masks, murals, and more!

**Course Outcomes:**
Outcomes are not available.

### Joy of Art: Art and Animals: Africa

**YOU 584**

Course description is not available.

**Course Outcomes:**
Outcomes are not available.

### Joy of Art: Art of Japan

**YOU 721**

Manga! Origami! Animé! Come discover different kinds of Japanese art. Learn how to draw Manga cartoons, fold beautiful origami, and paint delicate cherry blossoms. You will even learn about Japanese culture and even how to speak some Japanese!

**Course Outcomes:**
Outcomes are not available.

### Joy of Art: Art of Mexico

**YOU 717**

Get inspired by artist such as Olmec, Aztec, Diego Rivera, and Frida Kahlo and make great art in the tradition of Mexico. You will make terra cotta figures, paint great murals, and much more!

**Course Outcomes:**
Outcomes are not available.
<table>
<thead>
<tr>
<th>Joy of Art: Art of the '60s</th>
<th>YOU 586</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peace, love, and rock-n-roll await you as we create portraits in the style of Warhol, make far-out record album covers and colorful psychedelic posters, and tie-dye clothes.</td>
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<tr>
<td><strong>Course Outcomes:</strong></td>
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<td>Outcomes are not available.</td>
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<table>
<thead>
<tr>
<th>Joy of Art: Art of the 60's</th>
<th>YOU 720</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peace, love, and rock-n-roll await you as we create colorful psychedelic posters and groovy tie-dye clothes. Peter Max and Andy Warhol will inspire us to make our own “Happening”.</td>
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<tr>
<td><strong>Course Outcomes:</strong></td>
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<td>Outcomes are not available.</td>
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<table>
<thead>
<tr>
<th>Joy of Art: Art of the Ancient World</th>
<th>YOU 719</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Great Pyramids of Egypt and the MUMMIES within them, the Parthenon, and Stonehenge! Be inspired by these ancient cities and the ancient art they hold. Create art in the style of our distant ancestors all over the world.</td>
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<tr>
<td><strong>Course Outcomes:</strong></td>
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<td>Outcomes are not available.</td>
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<tr>
<th>Joy of Art: Fiber Arts</th>
<th>YOU 718</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use cloth, yarn, and other fibers as the basis for our artistic expression. Colorful batik (wax-resist dyeing), fabulous prints on cloth banners, sculptures, and tie-dye will help us learn about artists like Christo, Judy Chicago, and Faith Ringgold.</td>
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<tr>
<td><strong>Course Outcomes:</strong></td>
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<tr>
<td>Outcomes are not available.</td>
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<tr>
<th>Joy of Art: Greek Mythology in Art</th>
<th>YOU 504</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ancient Greek traditions are still living in the world of art today. We will learn about the different periods of Greek art, listen to the stories from mythology, and create works of legendary beauty.</td>
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<tr>
<td><strong>Course Outcomes:</strong></td>
<td></td>
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<tr>
<td>Outcomes are not available.</td>
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</tbody>
</table>
Joy of Art: Parisian Impressionists
YOU 588

Build the Eiffel Tower! Think about The Thinker! Learn which one is Manet and which is Monet! Experiment with pointillism, pastels, and plein air. Impressionism remains one of the most popular art movements, and we will have fun while painting, sculpting, and building.

Course Outcomes:
Outcomes are not available.

Joy of Art: The Art of Ancient Egypt
YOU 404

Course description is not available.

Course Outcomes:
Outcomes are not available.

Joy of Art: The Final Frontier - the Art of Outer Space
YOU 502

Boldly go where no artist has gone before! We will look at art ranging from Van Gogh to the Hubble photographs and create works of art that illustrate our love affair with space. We’ll fly to the moon and meet some aliens! Instructors: Anne LeVeque and Nina Russell

Course Outcomes:
Outcomes are not available.

Joy of Art: Urban Art
YOU 503

Explore the art of the city. From architecture to graffiti-style cartoons, from sidewalk art to grand monuments, we will create expressions of city life in a variety of media. We will look at artists such as Keith Haring, Diego Rivera, and David Macaulay. Instructors: Anne LeVeque and Nina Russell

Course Outcomes:
Outcomes are not available.
Jump-N-Flip POM and Dance Group
YOU 526
Join us in our Pom and Dance camp to learn the fundamentals of Pom performance, dance technique, and flexibility training. Topics include proper Pom motions, jumps, turns, leaps, and kicks. Invite your family and friends to our closing event—our Pom Performance Party! This is one camp you cannot afford to miss!

Course Outcomes:
Outcomes are not available.

Jump-n-Flip POM and Dance Group
YOU 702
Join us in our Pom and Dance camp to learn the fundamentals of Pom performance, dance technique, and flexibility training. Topics include proper Pom motions, jumps, turns, leaps, and kicks. Invite your family and friends to our closing event—our Pom Performance Party! This is one camp you cannot afford to miss!

Course Outcomes:
Outcomes are not available.

Junior Writing Institute
YOU 493
This continuing education course is designed for gifted and talented students in grades 2 and 3 and provide instruction on writing techniques. Students will learn how to develop and deepen their writing pieces. Topics include constructing more complex sentences using questioning; strengthening skills in word choices, including the use of adjectives and adverbs; using pictures and surroundings to develop sensory word vocabulary; and exploring paragraph structure and development.

Course Outcomes:
1. Explore writing techniques that develop and deepen writing skills.
2. Construct complex sentences using questioning.
3. Strengthen skill in word choices of adjectives and adverbs.
4. Use pictures and surroundings to develop sensory word vocabulary.
5. Explore new approaches to paragraph structure and development.

Junkyard Warriors
YOU 383
Course description is not available.

Course Outcomes:
Outcomes are not available.
Keyboarding for Computers
YOU 553
Want to become a typing wizard! Using state of the art IBM compatible computers, (one per student) and other tools, learn the correct finger placement on the computer keyboard, including letters, numbers and symbols. Build skills with drills and timed writings. Learn basic MS Word concepts, including formatting a letter, and a table.

Course Outcomes:
Outcomes are not available.

Keys to Algebra Success
YOU 733
Develop the skills needed to be successful in Algebra I, and learn test taking strategies for the HSA/PARCC assessment. Both are Maryland State high school graduation requirements. Learn such skills as how to solve equations, rules related to patterns and functions, evaluating expressions, and graphing. Develop problem solving and risk taking strategies needed to "attack" real world math stiuations.

Course Outcomes:
Outcomes are not available.

Keys to Algebra Success
YOU 734
Develop the skills needed to be successful in Algebra I, and learn test taking strategies for the HSA/PARCC assessment. Both are Maryland State high school graduation requirements. Learn such skills as how to solve equations, rules related to patterns and functions, evaluating expressions, and graphing. Develop problem solving and risk taking strategies needed to "attack" real world math stiuations.

Course Outcomes:
Outcomes are not available.

Kinetic Art & Engineering Studio
YOU 672
Dream, design and construct kinetic sculptures, eccentric structures, and your own amazing advanced creations in our makerspace. Cut wood, vacuum form plastic, drill, slice foam, and add motors and electronics! Perfect for artists, tinkerers, and budding engineers.

Course Outcomes:
Outcomes are not available.
Knights and Princesses/Let’s Cook
YOU 607

Ever dream of being a knight or princess? Well now is your chance! This camp will teach you all about the importance of etiquette and cooking, just like knights and princesses learned at the Royal Court. Come prepared to learn the significance of table manners, phone etiquette, meal/dessert preparation, and more!

Course Outcomes:
Outcomes are not available.

Law and Order: Mock Trial Edition
YOU 381

Course description is not available.

Course Outcomes:
Outcomes are not available.

Legal Eagles: Trial by Jury
YOU 703

Imagine for a moment you were going to determine whether or not someone is innocent or guilty. Take turns being a prosecutor, judge, and jury in this intriguing introduction to law and the court system. Within this course you get to hear cases, present testimony, and decide the verdict in a mock trial. To do this however, you will learn the basics of being a lawyer and the tools and tactics that they use. In this course, you will become familiar with identifying problems with legal arguments, how to use evidence to prove your case, the art of debate, and how to interpret different laws to defend your clients.

Course Outcomes:
Outcomes are not available.

Lego® Films and Stop Action!
YOU 379

Make your LEGOs come to life! Bring in your favorite action figures or LEGOs and create a short film with your friends. Whether you want to recreate a scene from Star Wars or design a world of your own, this class brings your dreams to the screen. Students will need to bring in LEGOs or action figures from home, but all other equipment is provided. Student-created films will be available on a password protected website to share with friends and family.

Course Outcomes:
Outcomes are not available.
## LEGO® Games
### YOU 325
Combine your two favorite activities: LEGOs and Video Games! In this program create your own LEGO universe, characters, and adventures in an interactive 2-D Video Game. Everyone is welcome in this one of a kind class. At the end of the class, leave with a LEGO 2-D game that can be shared with friends and family on a password protected website.

**Course Outcomes:**
Outcomes are not available.

## Lego® YOUUniverse! Make Your Own Adventure!
### YOU 385
Course description is not available.

**Course Outcomes:**
Outcomes are not available.

## Lifestyles of the Satisfied and Happy
### YOU 509
Who am I? What do I want? How do I get it? Most career planning focuses on getting what you want rather than exploring what might make you satisfied and happy. Learn to design a balanced life while keeping your perspective. Expand on who you are by developing your personal profile. Learn how your personality, values, developing skills, and life passions influence your career and life decisions. To make wise choices, you must establish and consolidate your identity and set goals based on who you are becoming. Consider your ideal lifestyle, and learn to creatively consider how you want to live before choosing a career path. You might just discover your "dream" career. You too can live the Lifestyle of the Healthy, Happy and Successful!

**Course Outcomes:**
Outcomes are not available.

## Magic of Line Drawing
### YOU 728
Learn the basic concepts of line drawing while working with still life objects. Gain confidence using a variety of materials, and explore techniques of form, shape, and perspective using angle and curve lines to develop contour and continuous contour to free line blind contour that gives tone and structure to still life objects.

**Course Outcomes:**
Outcomes are not available.
Magnetic Levitation for Future Transportation

YOU 668

Build and take home your own “futuristic Maglev” car to race. In 1999 a Japanese five-car maglev train set a record of 345 miles/hour. Yours won’t go that fast, but have fun building it and learning how it operates. Learn about the relationship between magnetism and electricity. You will also get to build a simple maglev track as well as a cool electromagnet. Learn how motors and generators work. Build and take home the world’s simplest motor. Make your own compass and take part in many other magnificent magnetic activities!

Course Outcomes:
Outcomes are not available.

Make It Go! - CARS

YOU 363

Experiment, invent, and fabricate unique wooden and plastic cars. Under the guidance of experienced woodworkers, you will design, fabricate, modify, and race a series of wooden models and self-propelled rolling vehicles. Learn to safely and accurately use hand tools to cut, shape, sand, and complete your projects to a high level of quality. Go home with durable wooden toys and experimental vehicles that spark the imagination and activate small hands with big ideas!

Course Outcomes:
Outcomes are not available.

Make It Go! – FLYING MACHINES

YOU 370

Design, build, and launch zipline racers, copters, and rockets! Girls and boys become aviation engineers by safely and accurately using hand tools to fabricate working models using wood and plastics. Create a wooden plane model. Experience wind tubes, propeller power, and high pressure air propulsion! Perfect for developing imagination, design, and hand skills; everyone takes home three original, high quality flying machines. Family members are invited to attend our Friday TOP SECRET launch party! Perfect for you if you love to build with real tools!

Course Outcomes:
Outcomes are not available.

Make Your First 3-D Video Game

YOU 382

By popular demand, we are now offering a 3-D game-design class. This experience allows you to develop a game concept that goes well beyond the limitations of the traditional classes. Learn the physics behind 3-D game design and explore event scripting, level design, controlling flow of game play, and story telling. This course is designed for young adults who have the desire to focus on game design in high school or college. Student-created games will be available on a password-protected Black Rocket website to share with friends and family.

Course Outcomes:
Outcomes are not available.
Make Your First 3-D Video Game!
YOU 563

Try this new version of a Black Rocket classic! By popular demand, we redesigned our 3-D game design class from beginning to end. This new class allows you to develop a game concept that goes well beyond the limitations of the traditional 2-D game design classes. Learn the physics behind 3-D games, explore beginner event scripting, level design, controlling flow of gameplay, and story telling. Student-created games will be available on a password protected Black Rocket website to share with friends and family. Students will work in teams for most of the program.

Course Outcomes:
Outcomes are not available.

Make Your First Video Game
YOU 384

If you love playing video games, this is the camp for you! Make your first video game in this one-of-a-kind class that shows you the keys to designing your first 2-D game. Conceptualization, play experience, challenge levels, graphics, sounds, and simple coding are just some of the concepts that you’ll explore. Student-created games will be available on a password-protected Black Rocket website to share with friends and family.

Course Outcomes:
Outcomes are not available.

Maker Tech: Light, Motion and Sound Lab
YOU 673

Design and build interactive sculpture and electronic instruments using microcontrollers, motors, LEDs, and maker materials. MaKey MaKey microcontroller available for take-home purchase, but all supplies are provided.

Course Outcomes:
Outcomes are not available.

Manners Are Cool! Etiquette Camp
YOU 455

Course description is not available.

Course Outcomes:
Outcomes are not available.
### Master Your Presentations

**YOU 152**

Wow your classmates! Learn to write and present your speeches using the latest technology. Working individually and in small groups. Learn to inform, persuade, and entertain while mastering Microsoft PowerPoint, Publisher, and inspiration software. Instructor: Anita Blank

**Course Outcomes:**

Outcomes are not available.

### Mathematical Circles

**YOU 434**

An outreach program that brings mathematicians into direct contact with pre-college students. These students, and sometimes their teachers, meet with a mathematician or graduate student in an informal setting, after school or on weekends, to work on interesting problems or topics in mathematics. The goal is to get the students excited about the mathematics they are learning, and to give them a setting that encourages them to become passionate about mathematics.

**Course Outcomes:**

Outcomes are not available.

### Mathematical Circles

**YOU 438**

An outreach program that brings mathematicians into direct contact with pre-college students. These students, and sometimes their teachers, meet with a mathematician or graduate student in an informal setting, after school or on weekends, to work on interesting problems or topics in mathematics. The goal is to get the students excited about the mathematics they are learning, and to give them a setting that encourages them to become passionate about mathematics.

**Course Outcomes:**

Outcomes are not available.

### Mathematics Fun

**YOU 155**

Did you know that every time you throw a pair of dice or play cards you are relying on mathematical probability? Did you realize that when you bake your favorite recipe, measurements are involved? Even ordering a pizza can lend itself to a variety of mathematical applications, besides fractions. This course is for any math students who wants to experience the many fun applications that mathematics plan in our everyday lives. Instructor: Terri Miller

**Course Outcomes:**

Outcomes are not available.
Mathematics in the Real World

YOU 726

Learn the importance of using mathematics in the real world through the project based learning (PBL). Examine math and how it relates to the real world by learning about checking and savings accounts, how to write checks and balance a checkbook using a check ledger. Discuss the benefits of a savings and establishing a savings account. Complete two major projects, one completed by the whole class and the second one selected from two options offered.

Course Outcomes:

Outcomes are not available.

Mindcraft: The Makerspace for Gamers

YOU 674

Take your Minecraft and gaming experience off of the screen! Design and build custom game controllers. Explore the sound of stuff by building interactive electronic objects. Play, design, and build on and off-screen.

Course Outcomes:

Outcomes are not available.

Minecraft Designers

YOU 561

If you love the game Minecraft, but always wanted to design your own characters and buildings for your games, then this class is for you! Learn the basics of creating 3-D modeling using a new software to design your very own objects, create skins for characters and import them into your favorite Minecraft games.

Course Outcomes:

Outcomes are not available.

Minecraft for Makers

YOU 675

Bring Minecraft into the real world! Invent electrified creatures that creep, spin, and glow. Build avatars and custom game gear using plastic, foam, wood, and hand tools.

Course Outcomes:

Outcomes are not available.
### Minecraft Modders

**YOU 659**

Use your favorite game to learn the basics of modding and the foundations of programming. Learn scripting and logic statements as you create your first mod! Introductory coding will also be taught through a simulated environment inspired by Minecraft. Student projects will be available on a Black Rocket website to share with friends and family. Students will work in teams for most of the program.

**Course Outcomes:**

Outcomes are not available.

### Music: Private Instruction

**YOU 167**

Private instruction in either piano, guitar, violin, viola, or cello for 45 minute sessions. Lessons are taught by faculty members who excel in their craft of teaching and performing. The schedule of all lessons will be arranged with the instructor.

**Course Outcomes:**

Outcomes are not available.

### Music: Private Instruction

**YOU 558**

Course description is not available.

**Course Outcomes:**

Outcomes are not available.

### Music: Private Instruction

**YOU 222**

Private instruction in either piano, guitar, violin, viola, cello, flute, percussion, drum set, or voice for ten 60-minute sessions. Lessons are taught by faculty members who excel in their craft of teaching and performing. The schedule of all lessons will be arranged with the instructor.

**Course Outcomes:**

Outcomes are not available.
<table>
<thead>
<tr>
<th>Music: Private Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>YOU 221</strong></td>
</tr>
<tr>
<td>Private instruction in either piano, guitar, violin, viola, cello, flute, percussion, drum set, or voice for ten 30 minute sessions. Lessons are taught by faculty members who excel in their craft of teaching and performing. The schedule of all lessons will be arranged with the instructor. Music lesson schedules are flexible.</td>
</tr>
<tr>
<td><strong>Course Outcomes:</strong></td>
</tr>
<tr>
<td>Outcomes are not available.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>YOU 556</strong></td>
</tr>
<tr>
<td>Course description is not available.</td>
</tr>
<tr>
<td><strong>Course Outcomes:</strong></td>
</tr>
<tr>
<td>Outcomes are not available.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>YOU 166</strong></td>
</tr>
<tr>
<td>Private instruction in either piano, guitar, violin, viola, or cello for 30 minute sessions. Lessons are taught by faculty members who excel in their craft of teaching and performing. The schedule of all lessons will be arranged with the instructor.</td>
</tr>
<tr>
<td><strong>Course Outcomes:</strong></td>
</tr>
<tr>
<td>Outcomes are not available.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>YOU 168</strong></td>
</tr>
<tr>
<td>Private instruction in either piano, guitar, violin, viola, or cello for one hour sessions. Lessons are taught by faculty members who excel in their craft of teaching and performing. The schedule of all lessons will be arranged with the instructor.</td>
</tr>
<tr>
<td><strong>Course Outcomes:</strong></td>
</tr>
<tr>
<td>Outcomes are not available.</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
### My Money MatterZ - I
#### YOU 281
This course is designed to teach teens basic economics: how to make and spend money, how it works in the real world, and what it's good for. Students will develop personal responsibility and practical knowledge while having fun with games, stories, and big ideas like human capital and opportunity cost.

**Course Outcomes:**
1. Examine the basic principles of economics.
2. Explore how to make and spend money.
3. Discover how money works in the real world and how it is used.
4. Develop personal responsibility and practical knowledge about money matters, like human capital and opportunity cost.

### My Money MatterZ - I
#### YOU 471
This continuing education course is designed for gifted and talented students in grades 4-6 and provides instruction on how money works. Students will learn how to make and spend money as well as how money is used in the real world. Topics include: personal responsibility; practical knowledge about money, human capital and opportunity costs.

**Course Outcomes:**
1. Examine the basic principles of economics.
2. Explore how to make and spend money.
3. Discover how money works in the real world and how it is used.
4. Develop personal responsibility and practical knowledge about money matters, like human capital and opportunity cost.

### Mysteries in History
#### YOU 704
Who built Stonehenge and why? Where are the Seven Wonders of the World, and who decided they were wonderful? What happened to the people of Easter Island? How did the Egyptians build the pyramids without using pulleys? These and other mysterious events in history make learning an exciting process and introduce you to intriguing events from the past. This class is a historic version of “Unsolved Mysteries” and promises to be just as entertaining.

**Course Outcomes:**
Outcomes are not available.
MythMania

YOU 569

This continuing education course is designed for students ages 11 - 15 and provides students an opportunity to discover unknown worlds, take on ferocious beasts, and walk among the gods by exploring the mythical worlds of the Greeks, Romans, Egyptians, Vikings, and Celts. Students will get to know the monsters, heroes, gods, and goddesses of each of these legendary civilizations. Students will compete in Olympics, race a chariot, wrap a mummy, build a Viking longboat, and lay siege to a castle—all while enjoying some of the greatest stories ever told!

Course Outcomes:
- Discover unknown worlds, take on ferocious beasts, and walk among the gods.
- Explore the mythical worlds of the Greeks, Romans, Egyptians, Vikings, and Celts.
- Learn about the monsters, heroes, gods, and goddesses of each of these legendary civilizations.
- Compete in Olympics, race a chariot, wrap a mummy, build a Viking longboat, and lay siege to a castle.

NASA: Academy of Future Space Explorers!

YOU 451

Mad Science and NASA have teamed up to bring the excitement and wonder of space down to earth in the NASA Academy of Future Space Explorers after school program. This is your chance to explore the farthest reaches of our solar system! Become a rocket scientist as you build your very own model rocket and discover the science behind space travel as you watch it blast off. Experience how it feels to work in space as you and your crew team up to build a model space station. Take home projects include Skyblazer II Rocket, Shuttle Copter, Lightning Launcher, Keplers Cube, Cosmic Chronometer and more!

Course Outcomes:
- Outcomes are not available.

New Game Building Software: 3D RAD

YOU 396

There’s a new 3D game making software program, and we’ve got it here in Rockville. It’s like working with ‘Game Maker’ controls, but it’s a full 3D environment— all of which is drag & drop programming (no lines of code). Plus it allows importing of other outside models. Join this course and review some basic concept material on the fundamentals of gaming on the first day. Then on the second day, plunge right into a 3D environment and start building. So don’t miss this opportunity to learn about the newest new stuff in game-building; it will be fun.

Course Outcomes:
- Discover the workings of 3D RAD by working with controls in a full 3D environment.
- Experiment with the drag and drop features that allows importing outside models.
- Explore the basic concepts and the fundamentals of gaming.
- Build a 3D environment.
### Next Step Needlecraft

**YOU 692**

Calling students interested in the fiberarts, those who enjoyed String Theory, and those curious how yarn is made. Join us for an adventure in Next Step Needlecraft! Learn how to crochet, spin yarn, create needle-crafted wonders and how to use a punch rug needle.

**Course Outcomes:**

Outcomes are not available.

### Paint-A-Rama

**YOU 499**

Come and make a splash in the art world while you learn drawing and painting basics, tricks, and techniques. Let your imagination fly and your creativity shine through as we experiment with watercolor and acrylic paints. We’ll create amazing realistic paintings, mosaics, and musical paintings!

**Course Outcomes:**

Outcomes are not available.

### Painting With Acrylic

**YOU 743**

Join us to learn about classical and contemporary painting, techniques and concepts. Develop an understanding of its formal language and the fundamentals of artistic expression. Learn to paint from still-life, landscape, and life models from observation. Create abstract and pop art works, and explore color theory, linear perspective, compositional structure, figure/ground relationships, visual perception, and spatial concepts. Analyze major painting styles and movements based on painting techniques.

**Course Outcomes:**

Outcomes are not available.

### Painting With Acrylic

**YOU 740**

Course description is not available.

**Course Outcomes:**

Outcomes are not available.
<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Code</th>
<th>Description</th>
<th>Course Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passion for Fashion</td>
<td>YOU 380</td>
<td>Course description is not available.</td>
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<tr>
<td>Course Outcomes:</td>
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<td>Outcomes are not available.</td>
<td></td>
</tr>
<tr>
<td>Piano for the 2nd and 3rd Grader--Level I</td>
<td>YOU 126</td>
<td>Small Group Piano Lessons for young children for students in grades K-3 from beginning to advanced levels.</td>
<td></td>
</tr>
<tr>
<td>Course Outcomes:</td>
<td></td>
<td>Outcomes are not available.</td>
<td></td>
</tr>
<tr>
<td>Piano for the 2nd and 3rd Grader--Level II</td>
<td>YOU 127</td>
<td>Small Group Piano Lessons for young children for students in grades K-3 from beginning to advanced levels.</td>
<td></td>
</tr>
<tr>
<td>Course Outcomes:</td>
<td></td>
<td>Outcomes are not available.</td>
<td></td>
</tr>
<tr>
<td>Piano for the 2nd and 3rd Grader--Level III</td>
<td>YOU 128</td>
<td>Small Group Piano Lessons for young children for students in grades K-3 from beginning to advanced levels.</td>
<td></td>
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<tr>
<td>Course Outcomes:</td>
<td></td>
<td>Outcomes are not available.</td>
<td></td>
</tr>
<tr>
<td>Piano for the 2nd and 3rd Grader-Level IV</td>
<td>YOU 125</td>
<td>Small Group Piano Lessons for young children for students in grades K-3 from beginning to advanced levels.</td>
<td></td>
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<tr>
<td>Course Outcomes:</td>
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<td>Outcomes are not available.</td>
<td></td>
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<tr>
<td>Course Title</td>
<td>Course Code</td>
<td>Description</td>
<td>Course Outcomes</td>
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<tr>
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<td>-----------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Piano for the First Grader: Level I</td>
<td>YOU 129</td>
<td>Course description is not available.</td>
<td>Outcomes are not available.</td>
</tr>
<tr>
<td>Piano for the First Grader: Level II</td>
<td>YOU 123</td>
<td>Small Group Piano Lessons for young children for students in grades K-3 from beginning to advanced levels.</td>
<td>Outcomes are not available.</td>
</tr>
<tr>
<td>Piano for the First Grader: Level III</td>
<td>YOU 130</td>
<td>Small Group Piano Lessons for young children for students in grades K-3 from beginning to advanced levels.</td>
<td>Outcomes are not available.</td>
</tr>
<tr>
<td>Piano for the Five Year Old: Level I</td>
<td>YOU 122</td>
<td>Course description is not available.</td>
<td>Outcomes are not available.</td>
</tr>
<tr>
<td>Piano for the Five Year Old: Level II</td>
<td>YOU 124</td>
<td>Course description is not available.</td>
<td>Outcomes are not available.</td>
</tr>
</tbody>
</table>
Piano for the Five Year Old--Level III

YOU 337

Course description is not available.

Course Outcomes:
Outcomes are not available.

Play in Chinese

YOU 714

A fun, laughter-filled program designed to enhance foreign language interests and skills. Each day you'll play games and do various camp activities (music, art; sports games; Chinese games; scavenger hunts; skits) allowing you to use the Chinese you know, learn from scratch, or supplement what you already know. Mixed levels and ages allows you to learn to work in groups and to share your strengths.

Course Outcomes:
Outcomes are not available.

Play in French

YOU 712

A fun, laughter-filled program designed to enhance foreign language interests and skills. Each day you'll play games and do various camp activities (music, art; sports games; French and Francophone games; scavenger hunts; skits) allowing you to use the French you know, learn from scratch, or supplement what you already know. Mixed levels and ages allows you to learn to work in groups and to share your strengths.

Course Outcomes:
Outcomes are not available.

Play in Spanish

YOU 711

A fun, laughter-filled program designed to enhance the foreign language interests and skills in you. Each day you'll play games and do various camp activities (music, art; sports games; Spanish games; scavenger hunts; skits) allowing you to use the Spanish you know, learn from scratch, or supplement what you already know. Mixed levels and ages allows you to learn to work in groups and to share your strengths.

Course Outcomes:
Outcomes are not available.
Pre-Algebra

YOU 194

For students who will take Math A, B, C, or IM (or other courses before Algebra I). A good review course for struggling Algebra I students also. Topics covered include translating words into symbols, translating problems into equations, adding/subtracting/multiplying/dividing real numbers, studying properties of equality, solving equations and problems, factoring polynomials, solving inequalities, and looking ahead to probability, statistics, geometry, and trigonometry.

**Course Outcomes:**
Outcomes are not available.

Pre-Algebra Power

YOU 416

Are you skilled at recognizing patterns? Do you enjoy the challenge of solving math problems? If so, this course is for you! Get the tools you need for success. Come and learn problem-solving strategies, solve math riddles, and explore number patterns. Learn the fundamentals of Pre-Algebra through math games, word problems, and hands-on activities. Get ahead of your peers and have fun while learning.

**Course Outcomes:**
Outcomes are not available.

Pre-Calculus

YOU 195

This course is designed for students who will take Pre-Calculus, Pre-Calculus with Analysis, IB Pre-Calculus, or IB Math Studies. Topics covered include trigonometry, vectors, sequences, and series.

**Course Outcomes:**
1. Discuss data analysis and circular functions.
2. Solve trigonometric inverses, identities and their applications.
3. Calculate using modeling projects.
4. Solve polar coordinates and complex numbers.
5. Solve problems involving sequences and series.

Pre-Engineering FUNdamentals Using LEGO®

YOU 705

Let your imagination run wild with tens of thousands of LEGO®! Build engineer-designed projects such as boats, bridges, mazes, and motorized cars—and use special pieces to create your own unique design! Explore the endless creative possibilities of the LEGO® building system with the guidance of an experienced Play-Well instructor. This is an ideal way to prepare for the challenge of the Engineering FUNdamentals course.

**Course Outcomes:**
Outcomes are not available.
Pre-Engineering FUNdamentals Using LEGO®

YOU 706

Let your imagination run wild with tens of thousands of LEGO®! Build engineer-designed projects such as boats, bridges, mazes, and motorized cars-and use special pieces to create your own unique design! Explore the endless creative possibilities of the LEGO® building system with the guidance of an experienced Play-Well instructor. This is an ideal way to prepare for the challenge of the Engineering FUNdamentals course.

Course Outcomes:

Outcomes are not available.

Prospectors Mystery Rock Workshop

YOU 669

Want to be a Prospector? Experience the thrill of discovery, much as prospectors did. In this class you’ll excavate for valuable gems, fascinating rocks, and some ancient fossils. All are yours to keep. Identify each of the 10 specimens found in your Mystery Rock. Specimens are packed in a hard clay material; learn to remove them without breaking or scratching them. Use excavation tools, a specimen brush, log book, sorting trays and labels, and learn to record the color of your specimen, the wet and dry texture, and its ability to float. Determine whether each specimen is a rock, gem, or fossil. Enjoy hands-on science.

Course Outcomes:

Outcomes are not available.

Psych: What It All Means

YOU 467

The taste of watermelon-the memory of your birthday-the wonder of optical illusions-the meaning of dreams-understanding this is all made possible through psychology. In this hands-on class, learn the regions of the brain and construct a model brain. Discover and test the functions of the five senses. Create optical illusions, learn the stages of sleep, and explore the meaning of dreams. Learn ways to improve your memory and discover techniques to train people and pets. It all happens here in “Psych: What It All Means.” Don’t miss it!

Course Outcomes:

Outcomes are not available.

Psych: What It All Means

YOU 411

Course description is not available.

Course Outcomes:

Outcomes are not available.
Youth Programs

Python: A Practical Introduction to Programming

YOU 730

This Continuing Education course is designed for GT students in grades 9-12, and provides an opportunity to learn Python, an open-source programming language. Topics include: learn to solve problems and apply standard programming concepts. Examine variables, math operations, data types, decisions, loops, functions, and objects. Develop games, random functions, graphic animations and other programs.

Course Outcomes:

1. Write, code, trouble-shoot, test, and run simple programs using Python.
2. Solve problems using structured computer methods.
3. Apply basic programming concepts to problem solving.
4. Apply variables, math operators, strings, lists, decision methods such as if-else loops, functions, classes and objects in Python programs.
5. Draw graphics with Python's Turtle module.

Reading for the SAT/ACT

YOU 729

This continuing education course is designed for gifted and talented students in grades 9 - 12 and provides them opportunities to prepare for the reading section of the SAT and ACT. Topics include: analyzing reading passages, practicing the techniques for reading prompts, building confidence and speed in reading, and improving Standard English usage.

Course Outcomes:

1. Analyze SAT/ACT reading passages.
2. Practice test taking skills to increase testing comfort.
3. Practice techniques for reading prompts.
4. Build speed in reading and understanding of Standard English usage.

Red Hot Robots

YOU 112

Learn about the uses of robots in the world. Spend time playing with our super cool red-hot robots. Use your skills to build your very own working robot to take home to "live" with you. Experiment with different robot designs and invent your own robot using recycled materials. Investigate the differences between humans and their robot counterparts. Experiment with super cool robots such as soccer robot, a line tracker, a hyper peppy, and a robotic arm.

Course Outcomes:

Outcomes are not available.
<table>
<thead>
<tr>
<th>Youth Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ribbon Landscapes</strong></td>
</tr>
<tr>
<td><strong>YOU 736</strong></td>
</tr>
<tr>
<td>Study drawing and painting concepts using a multimedia approach that helps you gain confidence with using varied materials. This course covers the fundamentals of composition, design, perspective, and construction. You’ll learn to work in charcoal, pencil, watercolor, and acrylic.</td>
</tr>
<tr>
<td><strong>Course Outcomes:</strong></td>
</tr>
<tr>
<td>Outcomes are not available.</td>
</tr>
</tbody>
</table>

| **Rockville Summer Soccer Program** |
| **YOU 528** |
| Course description is not available. |
| **Course Outcomes:** |
| Outcomes are not available. |

| **Rockville Summer Soccer Program** |
| **YOU 515** |
| The Montgomery College Men’s Soccer program stresses the fundamentals of speed, agility, and foot-skills development. Scrimmages are played to practice all of the important aspects of the game. All levels of abilities are welcome. Head Coach: Pedro Braz |
| **Course Outcomes:** |
| Outcomes are not available. |

| **Rockville Summer Soccer Program** |
| **YOU 514** |
| The Montgomery College Men’s Soccer program stresses the fundamentals of speed, agility, and foot-skills development. Scrimmages are played to practice all of the important aspects of the game. All levels of abilities are welcome. Head Coach: Pedro Braz |
| **Course Outcomes:** |
| Outcomes are not available. |

| **Rockville Summer Soccer Program** |
| **YOU 512** |
| Course description is not available. |
| **Course Outcomes:** |
| Outcomes are not available. |
### Rockville Summer Soccer Program

**YOU 582**

The Montgomery College Men’s Soccer program stresses the fundamentals of speed, agility, and foot-skills development. Scrimmages are played to practice all of the important aspects of the game. All levels of abilities are welcome.

**Course Outcomes:**

Outcomes are not available.

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### Rockville Summer Soccer Programs

**YOU 583**

The Montgomery College Men’s Soccer program stresses the fundamentals of speed, agility, and foot-skills development. Scrimmages are played to practice all of the important aspects of the game. All levels of abilities are welcome.

**Course Outcomes:**

Outcomes are not available.

---

### Rockville Tennis Camp

**YOU 614**

Students will be taught fundamentals and strategies depending on their level of play. We will include tennis drills, games, and match play. Come to the tennis courts at the Rockville campus prepared to learn tennis for a lifetime of fun.

**Course Outcomes:**

Outcomes are not available.

---

### Rockville Tennis Clinics

**YOU 224**

Students will be taught fundamentals and strategies depending on their level of play. We will include tennis drills, games, and match play. Come to the tennis courts at the Rockville campus prepared to learn tennis for a lifetime of fun.

**Course Outcomes:**

Outcomes are not available.

---

### Science in Motion!

**YOU 116**

Discover how things move with science. Take apart pellets to see what an owl cannot digest! View the world through a camera obscura that you make yourself. Join a team of camper engineers and build bridges, domes, cubes, and pyramids. Assemble and control pulleys, levers, catapults, and simple machines. Make your own sidewalk chalk, crystal gardens, and chromatography-dyed T-shirt.

**Course Outcomes:**

Outcomes are not available.
Secret Agent Lab

YOU 308

Suspects! Schematics! and Sleuths! Connect the dots using science to help solve a crime in this hands-on investigation of the science of sleuthing. Uncover the science involved in evidence gathering and analysis and fingerprinting detection. Enhance your recall and observation skills and learn how to use spy equipment.

Course Outcomes:
Outcomes are not available.

Secret Agent Lab

YOU 216

Suspects! Schematics! and Sleuths! Connect the dots using science to help solve a crime in this hands-on investigation of the science of sleuthing. Uncover the science involved in evidence gathering and analysis and fingerprinting detection. Enhance your recall and observation skills and learn how to use spy equipment.

Course Outcomes:
Outcomes are not available.

Secrets to Success in Science

YOU 421

Course description is not available.

Course Outcomes:
Outcomes are not available.

Senior Writing Institute

YOU 494

This continuing education course is designed for gifted and talented students in grades 4 and 5 and provides instruction on writing techniques. Students will learn how to master strategies and techniques that will expand and enhance their writing pieces. Topics includes exploring various forms of story structure, paragraph organization, figurative language, poetry, and idea development, including the use of personal writers' notebooks.

Course Outcomes:
1. Explore various forms of story structure and paragraph organization.
2. Use figurative language, poetry and idea development in writings.
3. Explore the use of personal writers' notebooks.
4. Experiment with strategies and techniques that expand and enhance writing pieces.
Sensational Science

YOU 452
Learn to harness heat energy, learn the science behind cotton candy and explore the properties of both light and color. As Mad Scientists, you will experiment with magnets and examine curious optical illusions. Learn to mix chemicals to make your own slime and analyze its properties! You will get to know your taste buds better and witness a hair-raising demonstration of static electricity! Take home an awesome project and home lab with fun facts and exciting experiments to do with Mom and Dad.

Course Outcomes:
Outcomes are not available.

Sensory Writing Experiment

YOU 618
Today, tomorrow, and always we will be exposed to a variety of stimulating sensory experiences. How well will you interpret these experiences and effectively communicate them to others as a writer? Well...come and share the mystery of this unique writing experience. Each day a different sensory experiment will unfold and present its own dynamic opportunity for you to explore and translate your own experience as a creative writer. It may be true that “Imagination is more important than Knowledge.”

Course Outcomes:
Outcomes are not available.

Smart Money Counts - Financial Mapping for Your Future

YOU 573
This continuing education course is design for gifted and talented students in grades 9 - 12 and provides the techniques and skills of smart money management. Topics include: how to navigate through the complex world of consumerism; debt; credit; investments; and budgets; financial skills critical to mapping out financial independence.

Course Outcomes:
1. Explore the concept, techniques and skills of smart money management.
2. Discover how to navigate through the complex world of consumerism, debt, credit, investments, and budgets.
3. Develop financial skills critical to mapping out financial independence.
Smart Money for Savvy Teens I
YOU 279

This multi-faceted, comprehensive investor-education program is designed to introduce students to the world of investing and finance. In a highly interactive and thought-provoking environment. Students will learn about the stock market, various investment options, the economy, and much more. Topics include defining dividends, bonds, and mutual funds; how transactions are made in an organized stock market; and the role of financial institutions in channeling savings to investment to secure their future. (This program meets State and National Personal Finance Standards.)

Course Outcomes:
1. Explain the meaning of financial terms like dividends, bonds, and mutual funds.
2. Describe how a transaction is made in an organized stock market.
3. Explore the role of financial institutions in channeling savings to investment and securing your future.

Soft Circuits
YOU 486

Does your emergency sewing kit include conductive thread, LEDs, and programmable hardware? No? Well, it’s about time you create some Soft Circuits! Learn to apply basic principles of electricity, electronics, and hand and machine sewing to creating durable soft objects and wearables that emit light, make sound, and survive the wash! Learn how to create and follow patterns, cut, sew, and design circuits and prototype from schematics. No experience necessary. You’ll create two awesome pieces to build your skills, then choose from a number of projects to make and take home!

Course Outcomes:
Outcomes are not available.

SOS for High School Students
YOU 071

Learning good study habits now will lay the groundwork for successful work habits as an adult. SOS is designed to provide background knowledge, resource materials, and suggestions that will relieve academic distress and help you optimize your success as a lifelong learner. This course is academic relief at your fingertips!! Learn to use academic and practical tools to increase your likelihood for success, including organizational tools, time management techniques, test preparation and test-taking strategies, note-taking guidance and/or personal responsibility tips.

Course Outcomes:
Outcomes are not available.
### SOS for High School Students

**YOU 317**

Learning good study habits now will lay the groundwork for successful work habits as an adult. SOS is designed to provide background knowledge, resource materials, and suggestions that will relieve academic distress and help you optimize your success as a lifelong learner. Learn to use academic and practical tools to increase your likelihood for success, including organizational tools, time management techniques, test preparation and test-taking strategies, note-taking guidance, and personal responsibility tips.

**Course Outcomes:**
Outcomes are not available.

### SOS for Middle School Students

**YOU 555**

Learning good study habits now will lay the groundwork for successful work habits as an adult. SOS is designed to provide background knowledge, resource materials, and suggestions that will relieve academic distress and help you optimize your success as a lifelong learner. Learn to use academic and practical tools to increase your likelihood for success, including organizational tools, time management techniques, test preparation and test-taking strategies, note-taking guidance, and personal responsibility tips.

**Course Outcomes:**
Outcomes are not available.

### SOS for Middle School Students

**YOU 319**

Learning good study habits now will lay the groundwork for successful work habits as an adult. SOS is designed to provide background knowledge, resource materials, and suggestions that will relieve academic distress and help you optimize your success as a lifelong learner. Learn to use academic and practical tools to increase your likelihood for success, including organizational tools, time management techniques, test preparation and test-taking strategies, note-taking guidance, and personal responsibility tips.

**Course Outcomes:**
Outcomes are not available.
SOS for Middle School Students

YOU 472

Learning good study habits now will lay the groundwork for successful work habits as an adult. SOS is designed to provide background knowledge, resource materials, and suggestions that will relieve academic distress and help you optimize your success as a lifelong learner. This course is academic relief at your fingertips! Learn to use academic and practical tools to increase your likelihood for success, including organizational tools, time management techniques, test preparation and test-taking strategies, note-taking guidance, and personal responsibility tips. Instructor: Don Milner

Course Outcomes:
Outcomes are not available.

SOS for Middle School Students

YOU 440

Learning good study habits now will lay the groundwork for successful work habits as an adult. SOS is designed to provide background knowledge, resource materials, and suggestions that will relieve academic distress and help you optimize your success as a lifelong learner. This course is academic relief at your fingertips!! Learn to use academic and practical tools to increase your likelihood for success, including organizational tools, time management techniques, test preparation and test-taking strategies, note-taking guidance, and personal responsibility tips. Instructor: Don Milner

Course Outcomes:
Outcomes are not available.

SOS for Middle School Students

YOU 554

Learning good study habits now will lay the groundwork for successful work habits as an adult. SOS is designed to provide background knowledge, resource materials, and suggestions that will relieve academic distress and help you optimize your success as a lifelong learner. This course is academic relief at your fingertips!! Learn to use academic and practical tools to increase your likelihood for success, including organizational tools, time management techniques, test preparation and test-taking strategies, note-taking guidance, and personal responsibility tips.

Course Outcomes:
Outcomes are not available.
### SOS for Students Entering High School

#### YOU 469

For students entering 9th grade. Learning good study habits now will lay the groundwork for successful work habits as an adult. SOS is designed to provide background knowledge, resource materials, and suggestions that will relieve academic distress and help you optimize your success as a lifelong learner. This course is academic relief at your fingertips! Learn to use academic and practical tools to increase your likelihood for success, including organizational tools, time management techniques, test preparation and test-taking strategies, note-taking guidance, and personal responsibility tips.

**Course Outcomes:**

Outcomes are not available.

#### YOU 361

Learning good study habits now will lay the groundwork for successful work habits as an adult. SOS is designed to provide background knowledge, resource materials, and suggestions that will relieve academic distress and help you optimize your success as a lifelong learner. This course is academic relief at your fingertips! Learn to use academic and practical tools to increase your likelihood for success, including organizational tools, time management techniques, test preparation and test-taking strategies, note-taking guidance, and personal responsibility tips. Instructor: Don Milner

**Course Outcomes:**

Outcomes are not available.

#### YOU 462

Learning good study habits now will lay the groundwork for successful work habits as an adult. SOS is designed to provide background knowledge, resource materials, and suggestions that will relieve academic distress and help you optimize your success as a lifelong learner. This course is academic relief at your fingertips! Learn to use academic and practical tools to increase your likelihood for success, including organizational tools, time management techniques, test preparation and test-taking strategies, note-taking guidance, and personal responsibility tips.

**Course Outcomes:**

Outcomes are not available.
Youth Programs

SOS for Students Entering Middle School

YOU 318

For students entering 6th grade. Learning good study habits now will lay the groundwork for successful work habits as an adult. SOS is designed to provide background knowledge, resource materials, and suggestions that will relieve academic distress and help you optimize your success as a lifelong learner. This course is academic relief at your fingertips! Learn to use academic and practical tools to increase your likelihood for success, including organizational tools, time management techniques, test preparation and test-taking strategies, note-taking guidance, and personal responsibility tips. Instructor: Don Milner

Course Outcomes:

Outcomes are not available.

Spanish is Fun

YOU 710

A fun, laughter filled program designed to enhance foreign language interests and skills. Find the fun in the Spanish you are learning in school. Each day, you'll play games and do various camp activities (music, art; sports games; Spanish games; scavenger hunts; skits) that allow you to use the Spanish you know, learn from scratch, or supplement what you already know. Choose a project (building skits, writing rap music, researching your interests on the internet). One or two projects will be chosen by the class, according to interests.

Course Outcomes:

Outcomes are not available.

Special Effects with Adobe AfterEffects CC

YOU 738

This continuing education course is designed for gifted and talented students in grades 11 - 12 and provides them the opportunity to use a powerful software application, called Adobe After Effects, to create motion graphics and visual effects for film and video. Topics include: using video shot to create sophisticated motion graphics; adding audio and effects to the motion graphics; setting keyframes on a timeline; and working with transform properties, motion paths, masks, and effects.

Course Outcomes:

1. Use After Effects to create motion graphics and visual effects for film and video.
2. Create motion graphics using video shot.
3. Add audio and effects to motion graphics.
4. Set keyframes on a timeline.
5. Work with transform properties, motion paths, masks, and effects.
Spectacular Sculpture: Plaster, Clay, and Wire, Oh My!
YOU 393

Course description is not available.

Course Outcomes:
Outcomes are not available.

Spectacular Sculpture: Plaster, Clay, and Wire, Oh My!
YOU 496

If you like to experiment, this class is for you! Join us as we explore the stupendous world of sculpture and its many different forms! Learn to work with clay, wire, and plaster, just to name a few. Bring your imagination and a smock, and leave with your own precious works of art.

Course Outcomes:
Outcomes are not available.

Start Your Own Business
YOU 715

This continuing education course is designed for gifted and talented students in grades 6 - 8 and provides them an opportunity to examine starting their own business. Topics include: examining the principles of entrepreneurship; creating a business plan and discussing marketing strategies; product development; financial aspects (expenses, revenue, income statement); fundraising and business ethics.

Course Outcomes:
1. Examine the principles of business ownership and entrepreneurship.
2. Create a business plan.
3. Explore product development, marketing strategies, and financial aspects of business ownership.
4. Develop fundraising methods and ideas.

Sticker and Sign Design Lab
YOU 365

Course description is not available.

Course Outcomes:
Outcomes are not available.
### Storybook Theatre

**YOU 691**

A perfect introduction to literature! Look at stories in a new way by recognizing characters, conflicts and plot. Become an ice queen like Elsa or sail on a pirate ship with Captain Hook. Climb a beanstalk with Jack or help keep Snow White safe from the Evil Queen. Create your own props, costumes, and set pieces to make the story really come to life. Also learn presentational skills, as well as how to follow directions from a director, how to participate with others as a good team player and listener, and how to be comfortable being in front of an audience.

**Course Outcomes:**

Outcomes are not available.

### String Theory: Understanding Knitting, Sewing and Yarn

**YOU 591**

Do you know the difference between string and yarn? Have you ever wanted to learn how to knit or sew, but didn’t know where to start? Want to create art that is wearable and versatile? Experience fiber crafts that are rich in history yet practical and portable. Learn how to spin your own yarn, dye it in a variety of colors, read a pattern, knit, and sew. Supplies are included and you will bring your projects home at the end of the camp.

**Course Outcomes:**

Outcomes are not available.

### Strings Summer Camp for Young Musicians

**YOU 425**

Course description is not available.

**Course Outcomes:**

Outcomes are not available.

### Strings Summer Camp for Young Musicians

**YOU 593**

The Strings Summer Camp for Young Musicians will enhance students’ musicianship and technical ability. The camp will have a strong emphasis on sight-reading, with opportunities to improve their sight-reading every day of the camp. In addition, the camp will include ensemble practice and orchestra rehearsals. Students will also experience music history, and theory through hands-on sessions. The camp will end with a Saturday concert open to the public.

**Course Outcomes:**

Outcomes are not available.
### Strings Summer Camp for Young Musicians

**YOU 523**

The Strings Summer Camp for Young Musicians will enhance students’ musicianship and technical ability. The camp will have a strong emphasis on sight-reading, with opportunities to improve their sight-reading every day of the camp. In addition, the camp will include ensemble practice and orchestra rehearsals. Students will also experience music history, and theory through hands-on sessions. The camp will end with a Saturday concert open to the public.

**Course Outcomes:**

Outcomes are not available.

### Strings Summer Camp for Young Musicians - Junior Level

**YOU 724**

The Strings Summer Camp for Young Musicians- Junior Level will enhance students’ musicianship and technical ability through chamber music coaching sessions, master classes, and daily recitals. In addition, the camp will include ensemble practice with faculty and orchestra rehearsals with Maestro Jorge Orozco. Musicians will also experience music history and theory through hands-on sessions. The camp will end with a concert open to the public.

**Course Outcomes:**

Outcomes are not available.

### Strings Summer Camp for Young Musicians - Senior Level

**YOU 725**

The Strings Summer Camp for Young Musicians will enhance students’ musicianship and technical ability through chamber music coaching sessions, master classes, and daily recitals. In addition, the camp will include ensemble practice with faculty and orchestra rehearsals with Maestro Pablo Saelzer. Musicians will also experience music history and theory through hands-on sessions. The camp will end with a concert open to the public.

**Course Outcomes:**

Outcomes are not available.

### Strings Summer Camp for Young Musicians Junior Level

**YOU 594**

The Strings Summer Camp for Young Musicians will enhance students’ musicianship and technical ability. The camp will have a strong emphasis on sight-reading, with opportunities to improve their sight-reading every day of the camp. In addition, the camp will include ensemble practice and orchestra rehearsals. Students will also experience music history, and theory through hands-on sessions. The camp will end with a Saturday concert open to the public.

**Course Outcomes:**

Outcomes are not available.
Super Science Make It & Take It
YOU 373
Course description is not available.

Course Outcomes:
Outcomes are not available.

Super Software Mania
YOU 018

Want to create exciting class reports? Discover how the correct software can help you get the job done. PowerPoint allows you to design snazzy book reports or super science presentations. Excel spreadsheets help you create tables, graphs, and charts as you play with numbers. Whether it’s school or family newsletters...greeting cards or invitations...Publisher is your creative tool. If you have a basic understanding of how to use the Windows operating system, join us to navigate in the Microsoft PowerPoint, Excel, and Publisher environments to quickly and efficiently create and format professional-looking documents, calendars, newsletters, greeting cards, flyers, presentations, and much more.

Course Outcomes:
1. Demonstrate an understanding of how to create snazzy reports and presentations in PowerPoint.
2. Create tables, graphs, and charts in Excel.
3. Create flyers, newsletters, greeting cards, and much more in Publisher.

Super Software Mania
YOU 487

Come learn about the three most commonly used programs in school and beyond—Microsoft Word, Excel, and PowerPoint. Learn to use these programs by creating your own fictional business in this exciting program! Design a budget for your business by finding real-world information on the web. Create flyers to advertise your business. Design a presentation about your business to show to potential ‘investors.’

Course Outcomes:
Outcomes are not available.
Table and Chair Building Workshop

**YOU 366**

Master craftspersons guide you, the guild members, through the design and fabrication of a well-crafted, durable and attractive chair or work table. Develop your own design and create a measured drawing and plan of procedure. You will safely and accurately, measure, cut, shape, plane, shave, sand, drill, and join furniture-grade materials using traditional hand tools. Emphasis is placed on workshop math, measured drawings, plans of procedure, project management, detailing, and topcoat/polychrome finishing. The FutureMakers mobile lab, equipped with professional workbenches and tools that are scaled to fit young makers, is available to all participants. Chairs or tables are finished with a durable, natural topcoat and ready to take home on the last day!

**Course Outcomes:**

Outcomes are not available.

The New Microsoft Office 2010

**YOU 413**

Course description is not available.

**Course Outcomes:**

Outcomes are not available.

The Sticker Lab

**YOU 490**

Stickers aren’t just for kids—they are an industry! Learn vector illustration and digital signmaking from experienced graphic designers. From your personal laptop workstation, use industry standard vector graphics software and commercial vinyl cutters to develop and produce a line of custom vinyl graphics and stickers to sell, trade, or keep. Draft a microenterprise plan—your digital drawings, photographs, and scanned artwork can become the beginnings of your business selling real vehicle graphics, professional grade decals, or awesome stencils. Software, digital file storage, hand tools, and all vinyl materials included.

**Course Outcomes:**

Outcomes are not available.
The Table and Chair Guild
YOU 488
Master craftspersons guide you, the guild members, through the design and fabrication of a well-crafted, durable, and attractive high quality table and chair combination. Develop your own design and create a measured drawing and plan of procedure. You will safely and accurately, measure, cut, shape, plane, shave, sand, drill, and join furniture-grade materials using traditional hand tools. Emphasis is placed on workshop math, measured drawings, plans of procedure, project management, detailing and topcoat/polychrome finishing. You will go deeper into the design, personalization, fabrication, and technical aspects of design/build, and produce working scale models of your projects. The FutureMakers mobile lab, equipped with professional workbenches and tools that are scaled to fit young makers, is available to all participants. Chairs or tables are finished with a durable, natural topcoat and ready to take home on the last day!

**Course Outcomes:**
Outcomes are not available.

Theatre Arts and Design
YOU 049

**Course Outcomes:**
Outcomes are not available.

Unlock Your Hidden Potential
YOU 722
Discover your strengths, learn healthy coping skills to use for stressful times, and practice assertive communication so people “HEAR” you. Experience how powerful positive thinking and acceptance really are. Explore ways to positively express yourself with a variety of easy-to-learn hands-on techniques. Learn about strategies like meditation, journaling, role playing, and visualization to enhance your SELF and become more resilient.

**Course Outcomes:**
Outcomes are not available.

Vehicle Invention Lab
YOU 676
Design, fabricate, and race original wooden cars and self-propelled rolling vehicles! Use real hand tools and makerspace materials in your take-home projects.

**Course Outcomes:**
Outcomes are not available.
Vision + Adventure
YOU 508
Who am I? What do I want? How do I get it? The answers to those questions can at times seem very simple and at others be an extreme challenge. People who know who they are are or are becoming, and what they want in life have a better chance of achieving their idea of success, and living a healthy lifestyle. Learn processes that you will be able to use again and again throughout your life. You might just discover your "dream" career. Learn to become the producer of The Adventurous Journey of You, while having fun.

Course Outcomes:
Outcomes are not available.

Watercolor Painting
YOU 470
Learn the basics of watercolor painting. Focus on developing watercolor techniques as an introduction to classical training in painting. Work on observational paintings and learn how to control the balance between water and paint to make paintings that are vibrant and lifelike. Final artwork will be discussed and critiqued. Instructor: Anatol Woolf

Course Outcomes:
Outcomes are not available.

Web Design
YOU 456
The worlds of Web and visual arts collide in this cutting edge introductory course. Learn to make your own Web site and how to take professional pictures and import them to your site. Explore the basics of color theory and make your Web site pop with dynamic animations created in Flash®. Create anything from a basic Web page to an innovative, artistic site with interactive functions. Then publish your vision online to share with friends, family, and the world to see!

Course Outcomes:
Outcomes are not available.
Web Design for Boys and Girls
YOU 575
This continuing education course is designed to show students the cleanest way to code in html for the web. This involves using CSS to handle the formatting of the pages, and is advantageous for many reasons. At all points, this course will attempt to avoid the use of anachronistic html for formatting, attempting to solidify the ideal that html is for content, and CSS is for formatting. Clean, readable code will also be emphasized, as for many students, this is their first introduction to coding of any kind, and this cleanliness will serve them well in future computer science classes. Finally, attention will be paid to good design choices, as layout, color and content can make or break a modern website. By the end of the course, students should have a website created with content of their choosing and published to the web.

Course Outcomes:
- demonstrate the ability to use basic technical skills using basic HTML, CSS, and Javascript
- design web pages using basic HTML, CSS, and Javascript
- Demonstrate the ability to modify, add, delete pictures, colors, links, videos
- Demonstrate the ability to create internal and external links
- recognize the difference between good and bad information in the internet

Web Design for Boys and Girls
YOU 489
Learn to make your own website and how to take professional pictures and import them to your site. Explore the basics of color theory and make your website pop with dynamic animations created in Flash®. Create anything from a basic web page to an innovative, artistic site with interactive functions. Then publish your vision online to share with friends, family, our summer web camps, and the world to see.

Course Outcomes:
Outcomes are not available.
What’s Cooking? The Little Chef’s Cooking Series

YOU 522

Great cooking begins with basic understanding of preparation and techniques. Work side-by-side with other students in a fun, hands-on environment, led by Chef Instructor Indigo, to create and cook up some fantastic recipes! During this action-packed week, you will learn kitchen basics, how to read recipes, nutritional value of foods, food groups, serving sizes, kitchen safety, safe food handling, and the “MY PLATE” concept. Through group discussions and activities, learn about foods from diverse cultures and share food adventures with classmates. Learn to prepare a variety of recipes for breakfast, lunch, dinner, snacks. Create a mini-recipe book to take home. All ingredients, materials, and kid-safe tools are provided. Food Allergy Disclaimer: Chef Indigo will make every attempt to identify ingredients that may cause allergic reactions for individuals with food allergies. In addition, any ingredient used within the recipe with possible allergen-containing ingredients will be highlighted. However, there is always a risk of contamination. There is also a possibility that manufacturers of the commercial foods (ingredients) that will be used throughout the course in some of the recipes may be prepared in facilities where nuts or nut oil are processed and/or manufactured. Please consider the risks of participation in this course if you have any known type of food allergies. Instructor Babette Couser

Course Outcomes:
Outcomes are not available.

Where the Wild Things Are

YOU 611

Summer is officially in full swing, and there is no better way to celebrate summer than taking advantage of sunshine and fresh air! In this camp, you will have the opportunity to explore the outdoors and all that nature has to offer. Come prepared for some great outdoor games and activities!

Course Outcomes:
Outcomes are not available.

Where the Wild Things Are

YOU 612

Course description is not available.

Course Outcomes:
Outcomes are not available.
Whose Line Is It Anyway?

YOU 388

Improvisation uses teamwork, trust, acceptance of others, and a "Yes, and..." attitude. These skills not only apply to life, but also build character, creativity, and confidence. So get wacky, play exciting games, meet new friends, and learn the secrets behind great improv, as well as techniques to ace your future acting auditions. Actors will end the week with a “Whose Line Is It Anyway?” performance (based off the popular TV show) to showcase their new skills for family and friends.

Course Outcomes:
Outcomes are not available.

Woodshop Apprenticeship

YOU 364

Become a woodworker by completing your apprenticeship! This hands-on traditional woodworking class develops fundamental “learning by doing” skills. Under the guidance of experienced shop professionals, you will complete three high quality personal projects—an elegant hardwood cutting board, a beautiful gift box, and an indestructible multipurpose toolbox. You will be introduced to fundamental “maker skills”: following plans, accurately using tape measures and rules, carefully marking, cutting, drilling, and shaping with hand tools. Every project is skillfully sanded, personalized with applied wooden features, and protected with traditional hand-rubbed finishes to last a lifetime.

Course Outcomes:
Outcomes are not available.

Woodshop: Basics to Boxes

YOU 678

Master woodworking basics in three take-home projects: an elegant cutting board, a gift box, and an indestructible toolbox. Follow plans, measure, mark, cut, drill, shape, and finish with hand tools. Returning students create advanced projects!

Course Outcomes:
Outcomes are not available.

Woodshop: Tools to Tables

YOU 677

Design and build a well-crafted table from plans you design. Safely and accurately measure, cut, join, and finish softwoods using hand tools. No prior experience required. Returning students build advanced projects!

Course Outcomes:
Outcomes are not available.
### Writing Basics

**YOU 650**

Course description is not available.

**Course Outcomes:**

Outcomes are not available.

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### Writing Club

**YOU 579**

Do you want to be a better writer-or would you just like to write more? If keeping up with school assignments doesn’t give you enough time to develop your creative side, join “The Club.” Here you will have many varied opportunities to compose pieces that are fun and that meet your interests. Your club-mates will provide informal feedback, and your instructor will offer one-on-one conferences at whatever level you find helpful. All writing will be done during the class.

**Course Outcomes:**

Outcomes are not available.

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### Writing for the SAT

**YOU 468**

This continuing education course is designed for gifted and talented students in grades 9-11 and provides instruction on writing essays for the SAT. Students will practice writing essays, revising drafts, evaluating finished writings, and managing timed situations. Topics include: analyzing essay prompts, writing to support opinions, argument structure, and avoiding fallacies in reasoning.

**Course Outcomes:**

1. Analyze SAT essay prompts and sample questions.
2. Support opinions by using own experiences and readings
3. Use logical thinking to enhance awareness of structure of arguments.
4. Practice writing essays and evaluate writings of your own and others.

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### Writing for the SAT

**YOU 572**

This continuing education course is designed for gifted and talented students in grades 9 - 11 and provides instruction on writing essays for the SAT. Topics include: analyzing essay prompts; writing to support opinions; strengthening argument structure; and avoiding fallacies in reasoning.

**Course Outcomes:**

1. Analyze SAT essay prompts and sample questions.
2. Use own experiences and readings to support opinions.
3. Use logical thinking to enhance awareness of structure of arguments.
4. Practice writing essays and evaluate writings of your own and others.
Writing for the SAT

YOU 397

Prepare for the writing section of the SAT. Analyze typical SAT essay prompts and sample responses, and heighten your comfort with the testing situation. Learn to support your opinions by using your own experiences and readings to accomplish the task of writing to a persuasive prompt. Using logical thinking, enhance your awareness of the structure of your arguments and avoid fallacies in reasoning. Practice writing the parts of an essay, composing entire essays, and revising and evaluating your own writing and that of your peers. Increase your ability to write in timed situations. Add rhetorical strategies to your repertoire of writing skills and improve your understanding of standard English usage through direct instruction and practice.

Course Outcomes:
1. Analyze SAT essay prompts and sample responses.
2. Support opinions by using own experiences and readings.
3. Use logical thinking to enhance awareness of structure of arguments.
4. Practice writing essays and evaluate writings of your own and others.

Writing Foundations

YOU 541

Develop the building blocks of stronger writing. Both individual and group activities will help you develop your skills. As you become aware of the importance of specific concrete details and the way to create them, you will complete small writing assignments to put your skills into practice. Grammar difficulties, especially errors in sentence structure, will be addressed along the way. All writing will be done in class. Please bring a snack (not containing peanuts) to keep your energy going!

Instructor: Geraldine Knasko Green

Course Outcomes:
Outcomes are not available.

Writing Foundations

YOU 637

Course description is not available.

Course Outcomes:
Outcomes are not available.

Writing Just For Fun II

YOU 418

Course description is not available.

Course Outcomes:
Outcomes are not available.
Writing SENSE-tively
YOU 448
Course description is not available.

Course Outcomes:
Outcomes are not available.

Writing the Essay for the SAT/ACT
YOU 651
This continuing education course is designed for gifted and talented students in grades 9 - 12 and provides instruction on writing essays critically for the SAT/ACT. Topics include: Analyzing essay prompts; writing to support opinions; strengthening argument structure; and writing in timed situations.

Course Outcomes:
Analyze SAT/ACT essay prompts and sample responses.
Support opinions by using your own experiences.
Practice writing essays and evaluate writing of your own and others.
Use logical thinking to enhance awareness of the structure of arguments.
Practice writing in timed situations and add rhetorical strategies to your writing skills.

X-Games: Collaborate-Create-Compete in the Ultimate Video Game Experience
YOU 562
For serious gamers only! Beyond 2-D and 3-D now it’s time to take it to another level by competing with the world! With a partner, develop games using a unique game engine. Learn advanced level editing, simple figure modeling, intermediate event scripting, and the impact of game play on user experience. You can continue to compete and play with students in other Black Rocket programs around the country.

Course Outcomes:
Outcomes are not available.

You Are What You Eat
YOU 567
The Science of Genetically Modified Organisms (GMO). Half the food on the market has been subjected to genetic manipulation. Find out which half! This is a hands-on workshop - test them yourself. Find out why we modify our food. Pick a GMO and investigate it. Learn how to separate the science from the crabgrass.

Course Outcomes:
Tests foods to determine if and how they have been modified, using the latest techniques, such as DNA isolation, polymerase chain reactions (PCR), gel electrophoresis, and fluorescence imaging.
Discover which half of the food on the market has been modified, and how and why we modify our food.
Determine what genes have been added to our food and what the genes do to our food.
### Young Science Explorers

**YOU 707**

Explore the world of Science and Technology. Spend a week using the latest bioscience laboratory techniques taught by experienced scientists. Take field trips to local Maryland science organizations and leading companies and talk to real-life scientists that make a living out of biotechnology. Find out about a wide variety of career choices and explore ways that Maryland organizations are researching and developing drugs, vaccines, and diagnostics. Experience first-hand what life science is all about!

**Course Outcomes:**
Outcomes are not available.

### Your Tiara's Crooked

**YOU 510**

Empowered girls become successful women. There are times when it’s all about you and times when it’s all about others. The trick is to learn that what matters most is what you think of yourself. Learn tips for building and/or maintaining inner-trust, ideas that boost self-esteem, and navigating social situations. Engage in activities designed to promote inner awareness, and body and overall confidence. Explore your life’s potential and increase your ability to turn a bad day into a good day and a good day into a great day. Oh yeah, while you're at it, learn to look into the mirror, reach high, and straighten those tiaras!

**Course Outcomes:**
Outcomes are not available.

### Zip, Zap, Boom

**YOU 453**

Race around the sciences in this exciting series of classes. Children will experiment with animal calls and take a trip to the bottom of the sea to see how marine life adapts to harsh conditions. Pop, jump and flip into kinetic energy during Energy Burst, and build your own robotic arm. Everyone will get to Mix It Up during our crazy chemistry class.

**Course Outcomes:**
Outcomes are not available.