2018-2020

CURRICULUM GUIDE

"Success in School . . . . Success in Life"

MILL SPRINGS ACADEMY

www.millsprings.org

MISSION STATEMENT

Mill Springs Academy is a values-based educational community dedicated to the academic, physical and social growth of those students who have not realized their full potential in traditional classroom settings.

"I've always believed that if a student can't learn the way we teach. . . .
We should teach the way a student can learn."

Tweetie Moore, Founder

CORE VALUES

- **Courteous**

  We value relationships that are based on attentive communication. We expect that all members of the community to practice open, honest communication and to do so in a mannerly and supportive way.
- **Considerate**

  We value relationships that are based on showing others respect and dignity. We want all students, teachers and parents to be aware and considerate of one another's differences. Through words, actions and expectations, the community acknowledges and accepts all members.
- **Cooperative**

  We value a community that is collaborative and responsive to the needs of its members and the larger world. The collective group of students, teachers and parents respond/react to individuals and groups with a shared interest in determining the best course of action to meet academic, social, emotional, and/or physical needs.

LEARNER PROFILE

Mill Springs Academy learners strive to be:

- Complex and creative ***thinkers,*** who explore their own curiosity and use creativity in all forms of expression. Thinkers who can listen, reason, reflect, make decisions, innovate, and solve problems, and can organize, support and defend their solutions.
- Independent, self-directed ***learners***, who can advocate for themselves, set and prioritize goals, monitor and evaluate progress, use information resources and emerging technologies, and adapt to change by developing strategies to deal with the unexpected.
- Effective and creative ***communicators*** who use a variety of skills and methods to express concepts and ideas.
- Informed and responsible ***citizens*** who can contribute to their community, their country and their world.
- ***Collaborative*** workers who can demonstrate cooperation and leadership within groups to accomplish a common goal.
- Quality ***producers*** whose work reflects high standards, originality and unique abilities.
- ***Community members*** who are responsible, positive and productive participants in their communities. Our Community Structure exists to help our students discover their strengths and challenges, support academic achievement, and promote independence, personal responsibility and community involvement.

OUR HISTORY

For more than three decades, Mill Springs Academy has been providing children with ADHD and learning disabilities an effective alternative to traditional educational settings. Located in Sandy Springs, Mill Springs was founded in 1981 as the New School. In 1986 the school's name was changed to Mill Springs Academy. In 1996, a devastating fire destroyed most of the campus. In August, 1997, Mill Springs relocated to our current 85-acre campus nestled in the beautiful rolling hills and pastureland of Alpharetta (Milton).

Mill Springs Academy is a not-for-profit, 501(c) 3 independent, college preparatory, co-educational school, grades 1 through 12. We offer small classes in a nurturing environment with attentive structure that enhances instruction and each student's appreciation for learning. Our commitment to learning supports the student by raising expectations and developing self-motivation, while providing skills and values for life.

Mill Springs Academy bases learning strategies on Academic Programs developed for each student by our multidisciplinary staff. Learning strategies are generated from psycho-educational evaluations, previous school records, diagnostic skills assessment, observations, standardized tests, communication with other professionals involved with the student and our continuing experiences with the student. Mill Springs Academy is committed to a comprehensive, multifaceted program to meet the academic, physical and social needs of the child.

The Mill Springs Academy college preparatory curriculum has follows the Georgia Performance Standards interwoven with our own scope and sequence. Our focus in grades 1 through 4 is remediation of the skills missing to reach grade level and potential. In the Middle, PreUpper, Communication Arts, and Upper Schools, the combination of remediation and compensatory strategies are based on the individual needs of the student. Additional technology assistance is introduced and strategies are taught to students to help bypass their deficits. The Communication Arts School was founded in 1998 to help those students grades seven through twelve whose academic challenges demand more individualized support. The curriculum is college prep, but a smaller classroom size of no more than eight students allows the faculty of this school division to provide even more attention to each student.

Well-documented research has shown that the LD/ADHD student does not perform well on standardized tests. Therefore our use of standardized testing is limited, but highly focused on both the academic strengths and challenges of our students. The results of standardized testing is one small piece of each student's Academic Program. MAP (Measure of Academic Progress) is administered yearly to the 1st – 11th grades. Mill Springs receives detailed scoring data which provides a profile of student performance, community characteristics, school characteristics, and stakeholder perceptions of the school (staff and stakeholders). The current MAP testing has confirmed and synthesized the three major challenge areas for our students who learn differently. The faculty will take this information and design individual Academic Programs for each student. In order to continue to develop the 21st Century skills our students will need to be successful in life, the goal will be to increase proficiency and fluency in these three areas: Mathematics with emphasis on Number and Operations, Measurement, Geometry, Algebra and Data Analysis and Probability. Reading development will stress Vocabulary, Comprehension Informational and Comprehension Literary. In the Language Arts, teachers will continue to focus on written expression, especially on Organizational Structures

and Context, Writing in a Variety of Genres, The Writing Process: Develop, Revise, Evaluate, Apply Conventions: Grammar and Sentence, Formation, Apply Conventions: Mechanics and Formatting.

CT Aspire is administered to all 9th and 10th graders in the fall when the PSAT is administered to the 11th graders. The SAT and ACT are taken at Mill Springs Academy with accommodations at the requests of students and parents. Information is shared with the Lower School, Middle School, PreUpper School, Communication Arts, and Upper School principals who keep individual records in student files and community information in each principal's files. Individual score reports are sent to each family for their records. In addition, information is maintained on an internal server so that the school psychometrist and the school administrators can readily attain a current profile for the school and individual student progress reports. Should additional testing be needed, Mill Springs has a head Psychometrist who can administer Key Math, WIAT, and GORT-4.

Mill Springs Academy offers a broad range of college preparatory and fine arts classes, along with college and fine arts placement support. We are focused on providing students with the tools, skills and values necessary for on-going academic success equivalent to his or her abilities. Typically almost 100% of our graduates are accepted to a college or post-secondary institution.

Mill Springs Academy provides a carefully structured environment within a warm, supportive atmosphere. Our structural approach involves our Community Levels System, daily values groups, individualized contracts and Life Space Interview techniques. Parent Education Groups are conducted throughout the year to afford parents the opportunity to understand and utilize our philosophy and techniques. Our Parent Groups positively enhance school-parent interactions. Conferences with parents are scheduled throughout the term and others are based on the immediate needs of the student as defined by the student, family or school.

Our Community Levels System is a school wide, reality-based structure that clearly defines the responsibilities and privileges associated with each level of responsibility. The system allows the student to make fully informed choices resulting in privileges or consequences. It allows the staff members to function as facilitators. Community meetings are led by the principal of each school division and involve both staff and peer feedback. The community monitors the interactions of its members and enforces the Levels System while academic expectations and interventions are individualized. Interactive expectations are the same for all students – to respect oneself and all others of the community. When students accomplish this major goal with the help of the MSA Community, they will have acquired sound social problem-solving skills, as well as, joy and self-satisfaction in their interactions with others.

Mill Springs is comprised of five schools that correspond to the following grades:

Lower School	grades 1 - 4
Middle School	grades 5 - 6
PreUpper School	grades 7 - 8
Communication Arts School	grades 7 - 12
Upper School	grades 9 – 12

Our Technology program encompasses grades 4 through 12. This program emphasizes the computer's use as a tool for learning and as an individualized intervention for learning. Because it is an intervention tool, students use their computers at home and at school. The faculty also uses laptops in the same manner, including Lower School faculty. Students in 1st through 3rd grades begin with desktops. Microsoft Outlook is used to handle e-mail, inside and outside of school. Microsoft Word, Excel, Access and PowerPoint are used for organizing, writing, editing and turning in assignments. We use the computer for research on the Internet that is integrated into our curriculum. This program is used for completing, maintaining and presenting our challenging academic work. In addition, we also use an organizational website, RenWeb, to help families and students organize their activities and the Learning Management System called **MUSTANG** which works in tandem with RenWeb. The learning management system (LMS) on the new website provides even more resources and the technology needed for students and teachers to interact.

In the fall of 2010, Mill Springs introduced two new technology programs for use by staff, parents, and students. The first is **RenWeb**, an online student management program. This program allows parents and students to access grades, assignments, lesson plans, and syllabi on-line from home. Parents and students have constant support available to learn how to access the information they need through our on-campus technology staff. RenWeb also consolidates the administrative management of student records. **AMAC** is a system which allows each student to access all their textbooks on-line. AMAC has both text-to-speech and speech-to-text capabilities. In addition, Mill Springs Academy added the **BOOKSHARE** system which allows students to access their pleasure books on-line.

ACADEMICS AT MILL SPRINGS ACADEMY

The Middle School grades (grades 5 -6), continues the goals of helping students learn academic and social strategies that will assist the student in how he learns best. A major focus is to allow the student the opportunity to learn what works for him, in the social, academic and study skill arenas. Students learn where their strengths and emerging areas lie, as well as how to best advocate for their learning needs and strengths.
The PreUpper School program (grades 7 -8) and the Upper School program (grades 9 -12) are designed for students with average to superior abilities who learn best in small classes. Incorporating multi-sensory and experiential instruction, the school's approach allows students to learn about and achieve mastery of themselves and the world around them. The Communication Arts School is a college-prep academic program for grades seven through twelve for those students who can be more successful in a much smaller, more individualized setting. Mill Springs Academy offers a college preparatory curriculum that emphasizes application of knowledge, not merely assimilation of information. Courses are designed to equip students with the skills they will need to succeed in life and in institutes of higher learning, while becoming independent, lifelong learners.

ASSISTIVE TECHNOLOGY AT MILL SPRINGS ACADEMY

- Mill Springs uses online textbooks, speech-to-text and digital text manipulation software, and extensive integration of technology into the curriculum.

- Student Textbooks are available to all students anytime, anywhere, located on Mill Springs Academy network folders and then copied to student laptops. Textbooks are in PDF format, and students can view their books or have them read to them using the *PDFAloud* toolbar or *ClaroRead Professional*. *ClaroRead Professional* includes a floating toolbar that will read virtually anything that can be displayed on a laptop. *ClaroRead* also has applications that will colorize the background and foreground of the screen for easier viewing by students with Dyslexia, and magnification capabilities that make it easier for students with vision needs to better see content on the screen. (*PDFAloud* and *ClaroRead* are already loaded on their laptops.)

- Fiction books are available through *Bookshare*, allowing students to have a digital copy on their laptop and either read the book on the computer or have it read to them using the *ReadOutLoud* software installed on their machines. The software also allows students to annotate, bookmark, and change the viewing setting of the books.

Software

Online Textbooks – through AMAC
Digital Fiction – through Bookshare
WordQ/SpeakQ Software Suite
ClaroRead Pro Software Suite
PDFAloud
Dragon Naturally Speaking
Windows 7 & 8
Audio Books

Hardware

Digital cameras and Video recorders
Smart Boards
Laptops and Desktops
Scanners
Copiers and printers
Document Cameras
Projectors
Headphones and speakers
Livescribe Echo Pens

Lower School Curriculum

LOWER SCHOOL

The Lower School is a warm nurturing environment of small classes and experienced, dedicated teachers. The small structured classes allow individualized instruction for students who are either not achieving their potential within a traditional setting or who need additional challenge in their area of strength. Academics incorporate a multi-sensory, “hands on” approach where many fun activities are woven into the instructional mastery process. The goal of Lower School is for students to master basic academic and social skills that will be the foundation for all future learning. A major focus is to convey a love of reading that will inspire them to read about subjects of interest to them and for building knowledge required to succeed academically. Equally important, we work on how to make friends and learn appropriate social interactions that are critical life skills.

CURRICULUM DESCRIPTION

Lower School teaches Core academic subjects of Phonemic Awareness, Word Study, Reading, Language Arts and Math in the morning between 8:30-11:30 a.m. when students are rested and can concentrate better. Higher interest subjects such as Science, Social Studies, Art, Computer and Drama are taught in the afternoon.

Fundations Program *Phonological Awareness* *Phonics* *Vocabulary* *Spelling* *Comprehension* *Handwriting/Letter Formation* *Fluency* *Decoding*	Grade 1 Grade 2 Grade 3 Grade 4
Reading *Novel Ties - high interest chapter books* *Noon Day Books - controlled in vocabulary* *Multiple Skills Series* *Comprehension and fluency*	
Language Arts *Writing skills and mechanics* *Grammar* *Language Usage and Practice* *Wordly Wise 3000* *Daily Language*	
Math *Modern Curriculum Press* *Touch Point Math*	
Science *Physical Science* *Life Science* *Earth and Space Science*	
Social Studies *History* *Geography* *Culture* *Economics* *Government*	
Enrichment *Drama, Music, PE, Art, Computer Skills*	

READING

READING- 1ST Grade

The first grade reading, phonics and language enriched program is a strong multi-sensory, linguistically and visually based program. It is very interactive and the students utilize all their senses when learning new skills. This curriculum is integrated and all skills learned are used in all subject areas. This method reinforces and enhances learning of new skills and skills are more quickly internalized and mastery is easier. Music is also a vital component of this program because children are naturally inspired by rhythm, rhyming and songs. Active teaching and learning by doing are the key elements in this curriculum and it is logical, sequential and orderly. It covers areas such as: phonological awareness, phonics, vocabulary, fluency and comprehension. It also incorporates the ***Fundations*** Program (level 1) which is an adaptation to the ***Wilson Reading System***. It is remedial program based on the principals of the Orton-Gillingham Methodology and is systematic, sequential, multi-sensory method of teaching phonemic awareness, phonics, and reading, writing skills and spelling. It provides the foundation for life long literacy for all children.

READING- 2nd Grade

The second grade reading program also focuses on phonological awareness, phonics, vocabulary, fluency and comprehension. We also use literature based chapter books which enhance comprehension, vocabulary skills, literary skills, writing skills, cross curricular activities and selected word study skills. The reading level of the books range from 1st to 5th grade but it is individualized per student. We also use a ***Fundations (Level 2)*** and ***Multiple Skills Series*** for independent reading and comprehension.

READING- 3rd & 4th Grades

The third grade reading program uses ***Fundations*** **(Level 3)** which is an adaptation of the Wilson Reading System. The principals of instruction are key to the success of ***Fundations***. These principals are explicit instruction, systematic instruction, motor-memory learning, repetition, and feedback. The third grade students increase their abilities to read aloud with fluency and comprehension. Third graders read more thoughtfully, discuss details, and extract deeper meaning in what they read. Most of the novels selected are a part of a literature based reading program called ***Novel Ties*** from Learning Links. The fourth grade reading program uses ***Just Words*** which is a highly explicit, multisensory decoding and spelling program. The fourth grade reading program continues with ***Novel Ties***. They read chapter books that enhance comprehension, vocabulary skills, literary skills, writing skills, cross-curricular activities and selected word study skills.

LANGUAGE ARTS

LANGUAGE ARTS – Grades 1-4
Lower School's Language Arts program consists of many materials that help support effective writing. The Language Usage and Practice (Steck-Vaughn) series is designed for students who require additional practice in the basics of effective writing and speaking. The program provides focused practice in key grammar, usage, mechanics, and composition areas. It helps students gain ownership of essential skills and presents practice exercises in a clear, concise format in a logical sequence. The **Wordly Wise 3000** program helps to expand critical grade level vocabulary and improve reading comprehension. Words from each lesson are commonly encountered in grade level literature, content area reading, textbooks, and high interest chapter books.

WRITTEN EXPRESSION – Grades 1-4
The goal of Written Language instruction in Lower School is to help children express themselves effectively in writing on or off the computer. To reach this goal, focus is placed on the four stages of writing: PREWRITING ~ planning, gathering thoughts, facts, webbing, and mapping; DRAFTING ~ Putting thoughts onto paper; REVISING and EDITING ~ Rewrite and revise to refine the story. Corrections in grammar and mechanics are made. The writing is fine-tuned; PUBLISHING ~ Display work to be shared, oral presentation.

The writing program is integrated into all the subject areas – writing across the curriculum. The writing activities include daily journal writing, brainstorming, book reports, subject matter reports, essays, and creative writing (poetry, holiday writing, and fictional stories). All the students write journal entries daily in their homeroom classroom. Students complete a journal booklet each month that consists of teacher guided writing based on sentence completion activities or a specific topic. Writing is monitored frequently so teachers are able to assess their writing skills throughout the year and observe progress made. Students have their own personal dictionary which aids in spelling and building on high frequency words which students will add on when journaling. The Lower School teachers address a step by step approach to teaching writing skills. The students learn effective strategies for writing or typing paragraphs, stories, and essays. The students learn how to create a topic sentence, brainstorm for supportive ideas, write a concluding sentence, and expand paragraphs into longer compositions.

The intended benefits of written language instruction are:

- Provides instruction, models (sentence completion)
- Practice in generating and expressing ideas
- Builds sentence structure and paragraph development
- Improves academic writing and computer skills
- Strengthens vocabulary skills
- Basic punctuation, capitalization, and grammar
- Proper spelling using Words I Use When I Write
- Proper formation of letters and spacing words
- Strengthens illustration
- Sequencing events (beginning, middle, end)
- Develops oral presentation skills
- Sequential thinking

MATH

MATH- 1ST Grade

The first grade math program uses manipulatives to explore concepts of number (including estimation) and number operations, geometry, measurement and relationships between numbers and geometric shapes. Language is used to explore problem solving through story situations and math is presented to the students as a language. Emphasis is placed on the concepts of number, place value, addition and subtraction concepts, strategies, recall of fact sums to 18, time to the half hour, money, length, pattern recognition, simple bar and picture graphs, addition and subtraction of 2 digit numbers and regrouping. ***Touch Point*** math is used and is a proven multi-sensory paper and pencil approach to basic computation.

MATH- 2nd Grade

The second grade math classes emphasize the concepts of numbers (number 0-999), place value (hundreds, tens and ones), addition and subtraction (mental computations and estimation strategies), skip counting, time to 5 minutes, money to $1, estimation of quantities and length, and simple bar and picture graphs. Manipulatives are used to explore addition and subtraction up to 2 digits, numerical, geometric and quantity relationships, fractions, multiplication readiness and measurement. Problem solving strategies are expanded more.

MATH- 3rd and 4th Grades

The third and fourth grade mathematics focuses on concepts of number and place value that are extended to millions. Emphasis is placed on making geometric models and using them to sort, classify and determine relations, measuring, organizing and interpreting data and using manipulatives, then symbolic procedures to multiply and divide (up to 3 digits by 2 digits). Manipulatives are used to determine perimeter, area and volume, add and subtract fractions, compare fractions and decimals and identify equivalent fractions. Additional strategies are used in mental computation, estimation of numbers; measurement, problem solving and they are introduced to basic algebraic concepts.

SCIENCE

SCIENCE- 1ST & 2nd Grades

The first and second grade science programs use ***Science by the Grade*** by Steck Vaughn. They work on concepts such as: unifying scientific concepts and processes, Science as an inquiry, Physical, Life, Earth and Space Science, Technology, Science in personal and social perspectives, history and the nature of Science. They use sequential and well organized information to present the content. Key terms and background information are provided prior to each section.

SCIENCE- 3RD & 4TH Grades

The third and fourth grade science programs use ***Science by the Grade*** by Steck Vaughn. They work much more in depth on concepts such as: unifying scientific concepts and processes, Science as an inquiry, Physical, Life, Earth and Space Science, Technology, Science in personal and social perspectives, history and the nature of Science. The units are broken up into: Physical Science, Life Science and Earth and Space Science. The concepts are covered much more comprehensively and incorporate more hands- on activities.

SOCIAL STUDIES

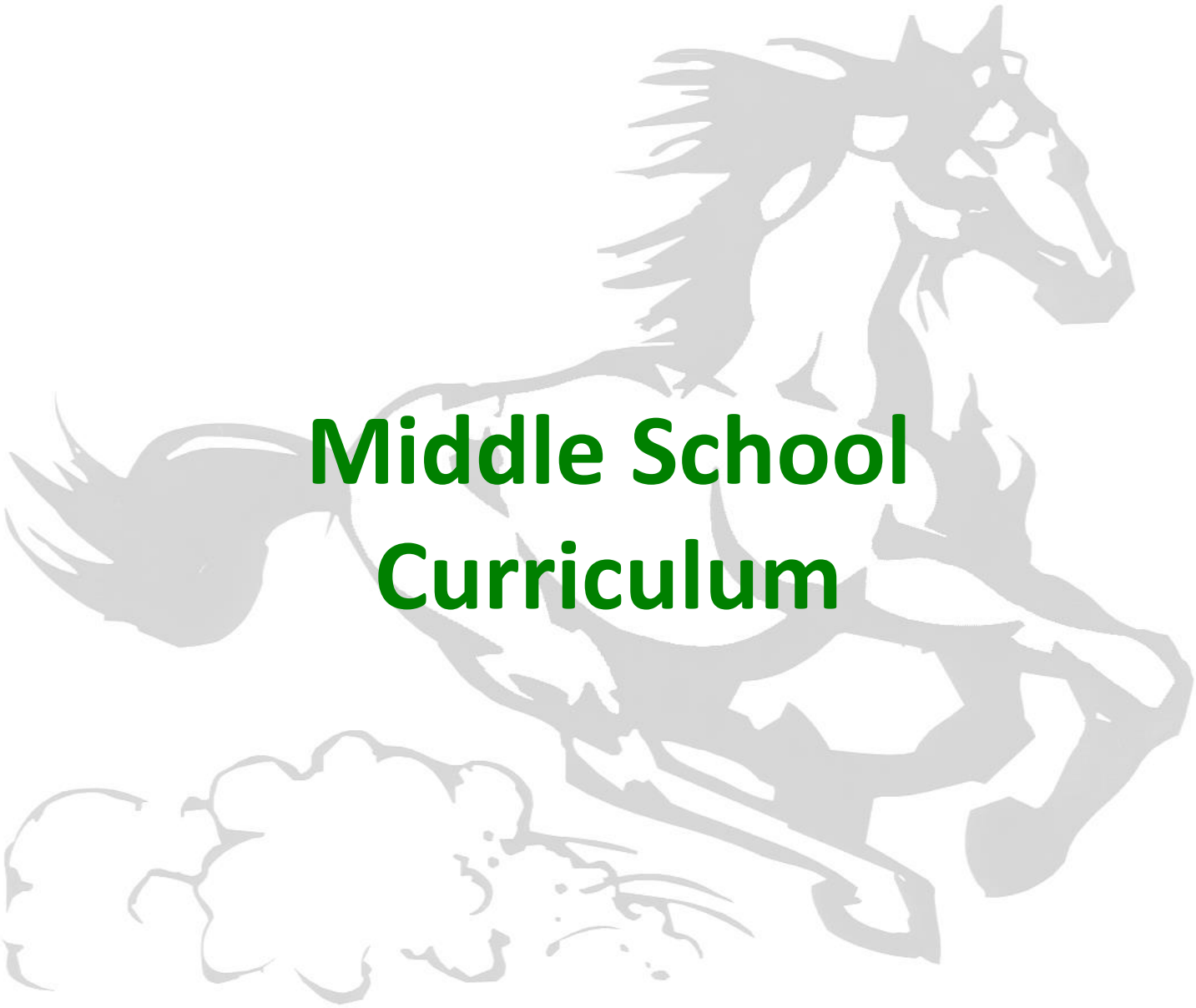
SOCIAL STUDIES- 1ST – 4TH Grades

The Social Studies program focuses on developing skills and knowledge in history, geography, culture, economics, civics and government. It also focuses on people and their interaction with each other and the world in which they live. The book ***Core Skills: Social Studies*** addresses these areas of study and correlates with social studies curriculum throughout the United States. They will be able to gain a better understanding of their family and neighborhood, practice map and geography skills and work with charts and other graphic devices. Each grade covers different units and topics, and each year the expectations increase.

COMPUTER SKILLS

COMPUTER SKILLS- 1ST – 4th Grades

Computer Skills lessons are age appropriate from www.kto8.com and www.freeice.com websites. Primary focus is on keyboarding skills, using Microsoft office applications and building vocabulary skills. Students will also be learning how to use the Library, how to research and using the Reading Counts program. The Reading Counts system is a way for students to read designated books and take online quizzes about each book at their own pace. Each student will have individualized goals he/she will need to meet to move on to the next level of mastery.



Middle School Curriculum

MIDDLE SCHOOL

The goal of the Middle School is to help students learn academic and social strategies that will assist the student in how he/she learns best. A major focus is to allow the student the opportunity to learn what works for him, in the social, academic and study skill arenas. Students learn where their strengths and emerging areas lie, as well as how to best advocate for their learning needs and strengths. It is our goal for our students to be successful life-long learners.

CURRICULUM DESCRIPTION

The Middle School offers: Math, Science, US History, World Geography, Language Arts and Reading are taught in a block format schedule. Students receive three hours of Reading instruction and three hours of Language Arts instruction each week.

Based on the semester system	
Reading 5th **Reading 6th**	2 years
Language Arts/ **Language Arts/**	2 years
Math Math 5th Math 6th Advanced Math - (b*ased on teacher recommendations)*	2 years
Science Earth 5th Earth 6th	2 years
Social Studies US History 5th World Geography 6th	2 years
Electives (semester courses) *Physical Education, Fine Arts, Technology* ***(see Electives Course Guide for all offerings)***	2 years

LANGUAGE ARTS

LANGUAGE ARTS/READING 5TH

The primary focus of this course will be to allow the student to gain confidence, while improving their writing skills through the use of the writing process. Written assignments will be built by using the brainstorming web/mapping process. The student will be encouraged to write creatively with appropriate vocabulary usage. Identifying and demonstrating the use of different sentences structures will be emphasized. Effective oral and written usage of the parts of speech, capitalization, punctuation, grammar and spelling will be incorporated into daily activities.
Important reading comprehension strategies will be learned for answering questions, finding the main ideas and important details. Through the use of context clues and reference materials the student will learn to order information chronologically. Methods such as the Orton-Gillingham approach may be implemented to teach pattern sounds.
Through weekly trips to the library students will learn to use a variety of resources and to select age appropriate books. Book report assignments will be completed through a variety of formats such as written, oral, and visual.

LANGUAGE ARTS/READING 6TH

The primary focus of this course will be to allow the student to gain confidence, while improving their writing skills through the use of the writing process. Written assignments will be built by using the brainstorming web/mapping process. The student will be encouraged to write creatively with appropriate vocabulary usage. Identifying and demonstrating the use of different sentences structures will be emphasized. Effective oral and written usage of the parts of speech, capitalization, punctuation, grammar and spelling will be incorporated into daily activities.
Important reading comprehension strategies will be learned for answering questions, finding the main ideas and important details. Through the use of context clues and reference materials the student will learn to order information chronologically. Through weekly trips to the library students will learn to use a variety of resources and to select age appropriate books. Book report assignments will be completed through a variety of formats such as written, oral, and visual.

MATH

MATH 5TH

The student will utilize prior knowledge to solve more complex word problems and equations. The concepts of multiplication, long division, decimals, fractions, geometry, mental math, and estimation will be mastered. The relevance of math to everyday use will be integrated, explored, and a computer will also be used throughout the course.

MATH 6TH

The student will continue practice applying previously mastered skills to relevant word problems and equations. The concepts of multiplication, long division, decimals, fractions, geometry, mental math, and estimation will be mastered. More complex concepts will be introduced. The relevance of math to everyday use will be integrated. Students will utilize technology whenever possible throughout the course.

ADVANCED MATH

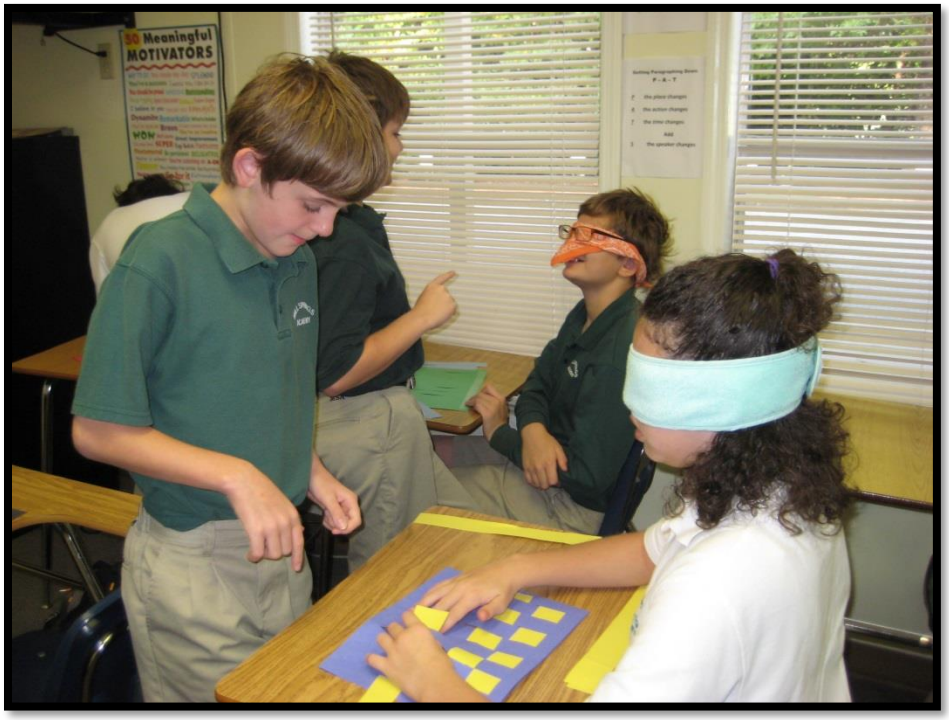
To allow for a successful transition to pre- algebra, students will build new skills based on concepts they have previously learned while making connections between arithmetic and algebraic skills. Topics that will be studied include: Variables and Expressions, Properties, Solving Inequalities, Integers and Absolute Value, Comparing and Ordering Integers, Operations with Integers, Factors and Monomials, Solving Equations with Fractions, Solving Equations with Decimals Metric/Standard System Conversions, Mean, Median, and Mode, Applying Algebra to Geometry, Probability.

SCIENCE

EARTH 5TH and 6TH

Students will learn about lab and safety procedures, technology, and research procedures in their exploration of Science. Students will work in a collaborative work environment completing individual, partnered, small group, and whole class projects. Various outdoor activities and field experiences will tie-in to classroom instruction.

The middle school science course is inquiry-based with emphasis on scientific inquiry focusing on the planet Earth and its place in the universe. What is the Earth made of? What role does water play? What causes weather? What makes the Earth so special? How does the moon affect the Earth? How does the Earth change? How do people change the Earth? What is out there in Space? How have we explored Space? Will we ever reach the stars? Why do we want to travel to other planets?



SOCIAL STUDIES

US HISTORY 5TH

The object of this course is to introduce students to U.S History. This year we will focus on the struggle for Freedom. Topics will include; the French and Indian War, Civil War, WWI and WWII, as well as the Vietnam War. In addition to the text, we will also focus on current events. We will be using *Time for Kids*, newspaper articles, news quick checks, and worksheets. Two related projects will be completed this year in order to broaden the knowledge of History.

Each student will be expected to contribute to class discussion, pass tests and quick checks, work cooperatively in groups, be creative with assigned projects, and utilize laptops to increase knowledge.

WORLD GEOGRAPHY 6TH

Sixth Grade students study Latin America, Canada, Europe and Australia. The goal is to acquaint the students with the world in which they live. The geography domain includes both physical and human geography, and students will begin to grasp the importance geography plays in their everyday lives. Students will learn about the cultures of the areas we study, including government, economics, and the events in history that shaped these cultures.

PreUpper School and Communication Arts Curriculum

PREUPPER SCHOOL

The PreUpper School program is designed for students with average to superior abilities who learn best in small classes. Incorporating multi-sensory and experiential instruction, the school's approach allows students to learn about and achieve mastery of themselves and the world around them. The goal of the PreUpper School is to enable students to become independent, lifelong learners. Self-respect, self-discipline and regard for others are embedded in an atmosphere of individual acceptance, respect, commitment.

COMMUNICATION ARTS SCHOOL

The Communication Arts School is a college-prep academic program from grades seven through twelve for those students who can be more successful in a smaller, more individualized setting. With a limited classroom size, teachers are able to provide students with the ultimate environment for their social and academic growth. The Communications Arts School shares all social events and elective classes with the Upper and PreUpper Schools, and students are active in every aspect of student life, including art, drama, sports, and yearbook and newspaper staff. Communication Arts and PreUpper Schools follow the same curriculum.

CURRICULUM DESCRIPTION

Mill Springs Academy offers a college preparatory curriculum that emphasizes application of knowledge, not merely assimilation of information. Courses are designed to equip students with the skills they will need to succeed in life and in institutes of higher learning, and become independent, lifelong learners.

COLLEGE PREPARATORY PROGRAM	
Based on the semester system	
Literature 7 and 8 **Literature 8 Honors**	2 years
Math PreAlgebra, Algebra I (carries 1.0 Carnegie Unit credit), Algebra 8, Algebra I Honors (carries 1.0 Carnegie Unit credit)	2 years
Science Life Science 7 Physical Science 8 (carries 1.0 Carnegie Unit credit) Physical Science 8 Honors (carries 1.0 Carnegie Unit credit)	2 years
Social Studies World Cultures 7 Georgia History 8 Georgia History 8 Honors	2 years
World Languages (optional) Spanish I, II (carries 1.0 Carnegie Unit credit each year) Chinese I (carries 1.0 Carnegie Unit credit each year) *(Must take 2 more years of Advanced classes in the Upper School)*	1 or 2 years
Electives (semester courses) *Physical Education (1 semester required)* *Fine Arts – Visual or Performance (1 semester required)* *Composition (1 semester strongly recommended)* *Other electives as offered*	2 years (two electives per semester)

GRADING SCALE: A - 90-100; B - 80-89; C - 75-79; D - 70-74; No Credit -69 or less

Eighth grade students must pass and carry a full load of core course credits (Math, Science, Literature, and History) to the Upper School. Any semester not passed must be made up in summer school prior to the 9th grade. (Honors classes require teacher recommendation.)

HONORS CLASSES

Honors course is a distinction applied to certain classes to distinguish them from standard course offerings. The difference between a regular class (such as Physical Science) and the honors class (Physical Science Honors) is not necessarily the amount of work, but the type of work required and the pace of studying. Honors courses are enriched; they offer the same material but in greater depth. Honors courses emphasize critical and independent thinking to produce creative applications of ideas and makes students think in a coherent, structured, and logical fashion. Students who are successful in an honors level course possess strong general intellect, strong or advanced Language Arts and/or Math skills, a solid work ethic, a high degree of self-motivation, take responsibility for all academic requirements and are able to work independently as well as collaboratively. **Motivation** is the main quality that characterizes an honors student. In addition to being committed to academics, they are encouraged to participate in volunteer service, athletics, organizations & clubs, internships, study abroad and cultural activities. Honors classes begin in the 8th grade.

Qualifications and Requirements:
Students are eligible as determined by criteria used to evaluate the student's potential for success in honors. These criteria consider both ability and academic achievement.

- An "A" grade (90-100) in the prerequisite course at least one of the two semesters. Must have a "B" (80-89) the other semester.
- Teacher recommendation
- Student must maintain a "B" grade (80-89) each semester to remain in Honors courses. (Must have an "A" one semester to be recommended to the next Honors course in the discipline.)
- Students new to MSA will be evaluated on a case by case basis to determine Honors placement. Typically a change to an Honors course would be made prior to the mid-point of a semester or at the beginning of the following/next semester.

Responsibilities Necessary for Success in Honors Classes:

- Be self-motivated.
- Take responsibility for all assignments and homework by keeping an organized schedule of assignments, homework and important dates and checking RenWeb daily. If that is not possible, be an advocate and talk to the teacher in order to work out a plan.
- Maximize note-taking skills by utilizing your strategies and accommodations.
- Uphold academic integrity. Follow the Level System.
- Think and work both independently and collaboratively. Develop and express your own thoughts. Take initiative, and explore the subject matter on your own. Also, think and work collaboratively. Group based projects are a large part of Honors classes. Contribute and participate in the group.

How to Get Into Honors Classes:

- Work hard in all classes with a consistent, strong, high-level work ethic and motivation. Utilize all your organization strategies.
- Earn good grades. Most honors courses have a minimum grade requirement.
- Be a good community member; follow the Levels system by being the three Cs.
- Participate in class discussions. Honors teachers often incorporate whole-class discussions into their curriculum; for their honors classes, they expect every student to be engaged and to add to the discussion.
- Ask a previous teacher for a recommendation. This request also shows initiative and that the student is serious about the honors course.

SEQUENCE OF MATH CLASSES FROM PREUPPER SCHOOL TO UPPER

- Algebra I in PreUpper is a full-year algebra course in 8th grade (1.0 Carnegie Unit) after which, if the student is successful, he/she would take Geometry in the Upper School. The exception would be if the student had marginal success and wanted to take it again in Upper School for a better grade, then that student would be allowed to take Algebra I in the 9th grade.

- Students who go on to take Geometry in the 9th grade, then take Algebra II in the 10th grade, Algebra/Trig in 11th grade and PreCalculus in the 12th grade or another appropriate math class such as Statistics or Personal Finance and as determined by the Upper School faculty. Calculus and College Algebra via dual enrollment may be options for students who like and excel in math.

- Students who take "Algebra 8" must take Algebra I in the 9th grade. The Algebra 8 class is not a full algebra course, rather it moves more slowly, covers basics and does not cover the full algebra I course work; therefore, these students must take a full Algebra I course in the 9th grade. Recommendations from the PreUpper faculty help determine which students going to 9th grade take Algebra I and which students may be ready for an Honors Algebra I course.

- PreUpper students who take PreAlgebra in 8th grade also take Algebra I in the 9th grade. Recommendations from the PreUpper faculty help determine which students coming to 9th grade take Algebra I and which students may be ready for an Honors Algebra I course.

- Students who begin 9th grade with Algebra I should then take Geometry in the 10th grade, Algebra II in the 11th grade, and Algebra/Trig in the 12 grade.

NOTE:

- All 7th graders take PreAlgebra.
- The PreUpper math faculty makes recommendations regarding placement in either Algebra 8 or Algebra I in the 8th grade.
- Any recommendation for Upper School coursework while in PreUpper school requires approval from the Upper School Principal.
- There will be some repetition/review in the 9th grade Algebra I class of what was taught in the Algebra 8 course.

LANGUAGE ARTS

LANGUAGE ARTS 7

This course focuses on the elements of grammar, composition, and literature. Information is presented through class discussion, handouts, videos/audios, etc. . Students will be able to recognize the use of writing strategies (foreshadowing, flashback, suspense, dialogue, dialect, tone, mood, character traits, etc.) in literature. They will identify the characteristics of various genres. We will discover fables, mythology, tall tales, legends and non-fictional reading like never before. We will identify and analyze theme or author's purpose within and across the different works of literature. We will analyze the effect of the narrator, voice, point of view, bias, and propaganda in literature and relate literature to setting or context or cultural values. The students will learn to produce coherent writing with appropriate organizational structure and length, context, language, grammar, and mechanics for a variety of genres. We utilize technology to support writing and use the MLA format for all formal research papers. Lastly, each class will use different materials and levels of mastery based on their appropriate grade level.

LANGUAGE ARTS 8

This course works to aid students in their ability to produce coherent writing with proper and appropriate organizational structure, grammar, syntax, and mechanics for a variety of genres. The course takes a constructivist approach towards analyzing various literary styles to reinforce both written expression and reading comprehension/fluency. It also employs various assistive technologies to support the writing process, allowing students to individually develop their own voice within their writing. Through these approaches, students develop a comprehensive ability to recognize the characteristics of various literary genres and develop a confidence to write effectively across such styles of literature. Periodic grammar reviews and exercises will also help students polish their composition skills. Students will learn basic literary terms, their meanings, and application to the study of literature.

MATH

PREALGEBRA

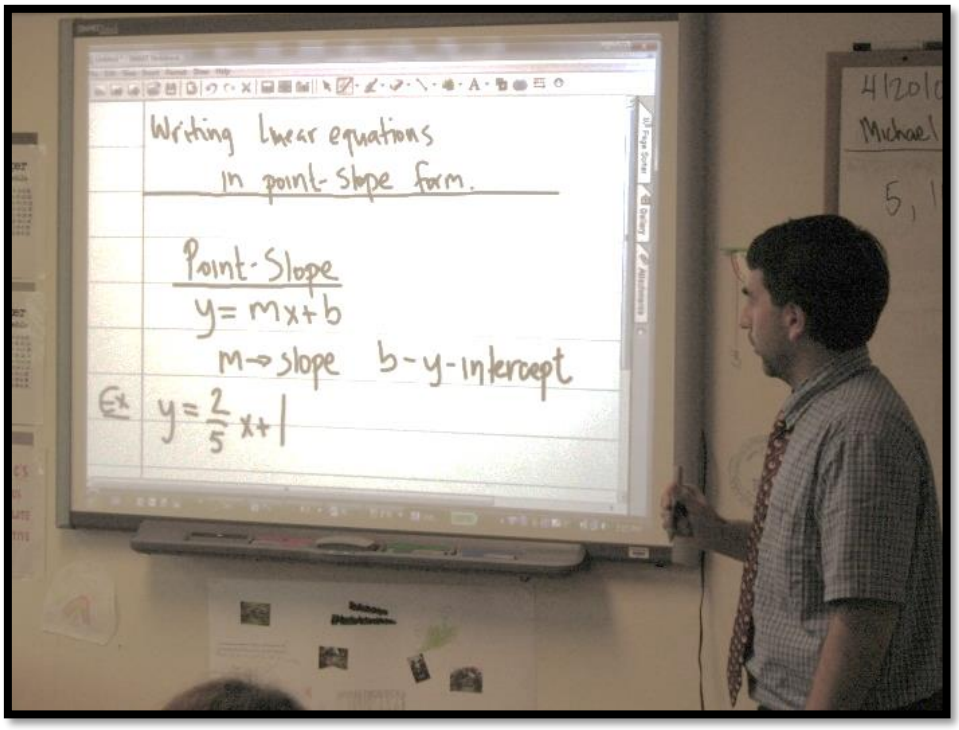
The object of this course is to develop a mastery of Order of Operations; Variables and Expressions; Inequalities; Integers and Absolute Value; Comparing and Ordering Integers; Adding Integers; Subtracting Integers; Multiplying Integers; and Dividing Integers. Students will also learn how to solve One-Step Equations and Inequalities. In addition, students will cover decimals, fractions, factors, exponents, operations with fractions and decimals, rates, ratios and proportions. Additionally, students will be taught specific problem-solving strategies, how to effectively use their resources, and proper study habits to help them become self-directed, independent learners.

ALGEBRA 8

This course is designed to serve as an introduction to the abstract concepts of Algebra and its applications in the real world. Through the use of the textbook, internet and in-class activities, students will better understand the fundamental concepts of Algebra. In this class, we will cover a wide variety of concepts including using variables to transform English phrases into mathematical expressions, using the Order of Operations and Distributive Property to simplify expressions. Additionally, students will explore function rules and learn to identify relationships within functions. Students will extend their ability to calculate with whole numbers, decimals, and fractions to include integers. We'll learn how to calculate theoretical and experimental probability. Using the properties of equality, we'll solve multi-step equations including equations with variables on both sides. In learning how to solve word problems, students will develop the ability to define variables, relate them to one another, and write an equation. Finally, students will use proportions to measure objects indirectly. **This course is not a full-year Algebra course, rather an introduction to Algebraic concepts. This course does not carry Carnegie Unit credits and students will be required to take Algebra I in either Upper School or PreUpper School for credit.**

ALGEBRA I – 1.0 CU

This course is designed to enhance students' comprehension of Algebra and its applications in the real world. Through the use of the textbook, internet and in-class activities, students will better understand the abstract concepts of Algebra. This semester, we'll learn how to calculate theoretical and experimental probability. Using the properties of equality, we'll solve multi-step equations including equations with variables on both sides. Students will develop the ability to define variables, relate them to one another, and write an equation in areas such as word problems. Students will use proportions to measure objects indirectly, and learn how to graph inequalities. Students will also be able to solve inequalities and utilize different methods for solving equations. They will write and solve compound inequalities by interpreting phrases that use *and* or *or*. They will work with functions that have two variables. They will also learn about function rules, and they will model data using equations, tables and graphs. They will use inductive reasoning for recognizing number patterns called sequences. Students will learn how to write linear equations and recognize their different forms. By working with the rate of change, they will understand how the slope of a line can be interpreted in real-world situations. They will determine whether the graphs of two linear equations are parallel or perpendicular. Finally, students will be able to accurately graph scatter plots and absolute value equations. Additional assignments will be assigned and the content will require a higher level of mastery and application. **This course is the full-year Algebra I course and carries Carnegie Unit credit.**



SCIENCE

LIFE SCIENCE

In Life Science we will use science process skills, the scientific method steps, parts and functions of cells, cell processes, and characteristics of the six kingdoms of living things. We will study why scientists use a classification system. Students will also learn more about plants and get a better appreciation of the role they play in our daily lives. The second semester we will continue with science process skills and students will be organizing lab projects. We will also study cell reproduction, genetics, heredity and the organ systems of the human body. Students will have a better understanding of the immune system and certain diseases. We will also study microbiology and see how the microscope changed the world. Finally, we will study how animals are classified. Content information will be presented in a variety of ways, such as, teacher lecture, class discussion, online tutorials/assessments, labs, group activities, videos, and current events.

PHYSICAL SCIENCE – 1.0 CU

This course is designed to give a broad overview of Physical Science by developing science process skills and a basic understanding of introductory Chemistry and Physics. The curriculum is reinforced by many hands-on laboratory activities and the use of a computer and calculator is required throughout the course to complete written assignments and to record, analyze, and present data in charts and graphs. Students are expected to do assigned reading and homework *outside of class* to be prepared for daily discussions and activities. **Science Process Skills –** Students will develop and improve their scientific inquiry skills by making predictions and then carrying out experiments that include research, identifying and controlling variables, as well as recording and analyzing data. During lab activities, students will learn to use laboratory equipment and the SI (metric) system of measurement. **Chemistry**—Students will understand the similarities and differences between states of matter and learn to identify chemical and physical changes. They will be able to describe the structure of the atom and the arrangement of protons, electrons, and neutrons. Student will learn the names and symbols of the more common elements on the periodic table. They will use the periodic table to predict chemical and physical properties of the elements. After studying how to write and read chemical equations, physical science students will learn to recognize the basic chemical reactions including synthesis, decomposition, single replacement, and double replacement. They will become familiar with the chemistry of acids and bases. **Physics-** Students will able to generate data and make appropriate calculations to determine basic physics concepts such as distance, speed, velocity, and acceleration. **This course carries Carnegie Unit credit.**

PHYSICAL SCIENCE HONORS – 1.0 CU

This course is designed to give a broad overview of Physical Science by developing science process skills and a basic understanding of introductory Chemistry and Physics. The curriculum is reinforced by many hands-on laboratory activities and the use of a computer and calculator is required throughout the course to complete written assignments and to record, analyze, and present data in charts and graphs. Students are expected to do assigned reading and homework *outside of class* to be prepared for daily discussions and activities. **Science Process Skills –** Students will develop and improve their scientific inquiry skills by making predictions and then carrying out experiments that include research, identifying and controlling variables, as well as recording and analyzing data. During lab activities, students will learn to use laboratory equipment and the SI (metric) system of measurement. **Chemistry**—Students will understand the similarities and differences between states of matter and learn to identify chemical and physical changes. They will be able to describe the structure of the atom and the arrangement of protons, electrons, and neutrons. Student will learn the names and symbols of the more common elements on the periodic table. They will use the periodic table to predict chemical and physical properties of the elements. After studying how to write and read chemical equations, physical science students will learn to recognize the basic chemical reactions including synthesis, decomposition, single replacement, and double replacement. They will become familiar with carbon compounds, new materials like polymers and ceramics, and the chemistry of acids and bases. They will become familiar with the chemistry of acids and bases. **Physics**- Students will able to generate data and make appropriate calculations to determine basic physics concepts such as distance, speed, velocity, and acceleration. Additional assignments, labs and projects will be assigned and the level of mastery is higher. **This course carries Carnegie Unit credit.**

SOCIAL STUDIES

WORLD CULTURES

This is a course of the cultural, historical, and physical characteristics of many different geographical areas around the world. The first semester introduces students to the five themes of geography and using the tools of geography. During the first semester, students will learn about geography and the continent of Africa. They will be learning about the physical geography, the past and the culture of the continent of Africa. The second semester introduces students to the regions of Africa, Asia and Latin America. Students will work toward achieving mastery of the 20 core social studies and will have the opportunity to use research sites from the internet and publications for integration of related information. All geographical regions studies will include the coverage of the physical, historical and cultural characteristics of the specific region.

GEORGIA HISTORY

Georgia History is approached as a survey course that will give students a wide range of information regarding the state of Georgia. First semester will explore several different eras and time periods beginning with European Discovery of the New World. This class will also examine the founding of Georgia, conflicts with Indians, slavery in Georgia, the Civil War and Reconstruction. During the second semester, we cover the Civil War and Reconstruction, New South, Civil Rights, WWI and WWII, Vietnam, Cold War, and Georgia's 3 branches of government. Map skills and geography will be incorporated into many aspects of the curriculum.

GEORGIA HISTORY HONORS

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Upper School and Communication Arts Curriculum

UPPER SCHOOL

The Upper School program is designed for college-bound students with average to superior abilities who learn best in small classes. Incorporating multi-sensory and experiential instruction, the school's approach allows students to learn about and achieve mastery of themselves and the world around them. The goal of the Upper School is to enable students to become enthusiastic independent, lifelong learners. Self-respect, self-discipline and regard for others are engendered in an atmosphere of individual acceptance, respect and commitment.

COMMUNICATION ARTS SCHOOL

The Communication Arts School is a college-prep academic program from grades seven through twelve for those students who can be most successful in a smaller, more individualized setting. With a limited classroom size, our teachers are able to provide students with the ultimate environment for their social and academic growth. The Communications Arts School shares social events and elective classes with the Upper School, and are active in every aspect of student life.

CURRICULUM DESCRIPTION

Students attending MSA, ninth through twelfth grades, must earn 24 Carnegie Units (CU) to graduate. Each class earns 0.5 CU per semester. One (1.0) CU is equivalent to 1 credit hour. Students earn credits in both core and elective courses. All classes are based on Carnegie Units (CU) and each student must have 24 CUs to graduate. Credits transferred from other schools are individually evaluated. Honors Classes require teacher recommendation.

The following list includes graduation requirements in addition to core courses:

- *Physical Education (1 semester required)*
- *Health (1 semester required)*
- *Junior Transitions (1 semester required - Spring); Senior Transitions (1 semester required - Fall)*
- *World Language (2 years required unless waived by testing)*
- *Economics (1 semester required)*
- *Civics (1 semester required)*
- *World Geography (1 semester required unless waived by assessment)*
- *Science Course (1 full year required - to make 4 years of science which are required for graduation. Students can take 5 years of science if they are interested in science and want 5 years of science.)*

Upper School Curriculum and Graduation Requirements	
English 9th Literature/Composition or CA World Literature (1.0) American Literature (1.0) British Literature (1.0) Senior Composition and Research (1.0)	4 CU
Math Algebra I (1.0) Algebra II (1.0) Geometry (1,0) Advanced Algebra/Trigonometry (1.0) Pre-Calculus (1.0) Calculus (at MSA or dual enrollment) (1.0) Personal Finance (0.5) Statistics (0.5 – 1.0)	4 CU
Science Biology (1.0) Chemistry (1.0) Physics or Physical Science (1.0) Science elective: Anatomy & Physiology or Forensics (1.0) or Environmental Science (1.0)	4 CU
Social Studies World History (1.0) Civics (0.5) Economics (0.5) American History (1.0) World Geography (0.5)	3.5 CU
World Languages Spanish I, II, III, IV (1.0) Chinese I, II, III, IV (1.0)	2 CU
Physical Education and Health (Health 0.5 units and Physical Education 0.5 units)	1 CU
Transitions Classes Junior Transitions (0.5) and Senior Transitions (0.5)	1 CU
Electives (See Elective Course Guide for all offerings.)	5 - 6 CU

GRADING SCALE: A - 90-100; B - 80-89; C - 75-79; D - 70-74; No Credit -69 or less

HONORS CLASSES

Honors course is a distinction applied to certain classes to distinguish them from standard course offerings. The difference between a regular class (such as Physical Science) and the honors class (Physical Science Honors) is not necessarily the amount of work, but the type of work required and the pace of studying. Honors courses are enriched; they offer the same material but in greater depth. Honors courses emphasize abstract, critical and independent thinking to produce creative applications of ideas and encourage students to make cognitive connections across multiple topics and connections. Students who are successful in an honors level course possess strong general intellect, strong or advanced Language Arts and/or Math skills, a solid work ethic, a high degree of self-motivation, take responsibility for all academic requirements, and are able to work independently as well as collaboratively. **Motivation** is the main quality that characterizes an honors student. In addition to being committed to academics, they are encouraged to participate in volunteer service, athletics, organizations & clubs, internships, study abroad and cultural activities. Honors classes begin in the 8th grade. In Upper School, each department has its own set of criteria for placing students in Honors Classes, and all department faculty members contribute to the placement decision.

Qualifications and Requirements:
Students are eligible for Honors classes as determined by criteria used to evaluate the student's potential for success in honors. These criteria consider both ability and academic achievement.

- An "A" grade (90-100) in the prerequisite course for at least one of the two semesters. Must have a "B" (80-89) the other semester.
- Teacher recommendation
- Student must maintain a "B" grade (80-89) each semester to remain in Honors courses. (Must have an "A" one semester to be recommended to the next Honors course in the discipline.)
- Students new to MSA will be evaluated on a case by case basis to determine Honors placement. Typically a change to an Honors course would be made prior to the mid-point of a semester or at the beginning of the following/next semester.

Responsibilities Necessary for Success in Honors Classes:
- Be self-motivated.
- Take responsibility for all assignments and homework by keeping an organized schedule of assignments, homework and important dates, and checking RenWeb daily. If that is not possible, be an advocate and talk to the teacher in order to work out a plan.
- Maximize note-taking skills by utilizing your strategies and accommodations.
- Uphold academic integrity. Follow the Level s System.
- Think and work both independently and collaboratively. Develop and express your own thoughts. Take initiative and explore the subject matter on your own. Also, think and work collaboratively. Group based projects are a large part of Honors classes. Contribute and participate in the group.

How to Get Into Honors Classes:
- Work hard in all classes with a consistent, strong, high-level work ethic and motivation. Utilize all your organization strategies.
- Earn good grades. Most honors courses have a minimum grade requirement. (see requirements above)
- Be a good community member by following the Levels system and by being the three Cs.
- Participate in class discussions. Honors teachers often incorporate whole-class discussions into their curriculum; for their honors classes, they expect every student to be engaged and to add to the discussion.
- Ask a previous teacher for a recommendation. This request also shows initiative and indicates that the student is serious about the Honors course.

ENGLISH

9Th LITERATURE/COMPOSITION – 1.0 CU

9th Grade Composition and Literature

This course is a study of developing writing/ composition skills in multiple formats, through various drafting/editing stages as well as for the purpose of composing for an audience. Class work will include analytical and creative journal entries, discussions, a 5-paragraph Research essay tied with reading a non-fiction work, as well as analyses of World Literature short stories, poetry and a novel/memoir. In conjunction, the students will also develop and employ strategies for vocabulary, grammar and reading comprehension. At the end of the year, the student will develop a portfolio of self-selected works, including self-reflections about the works. Students have the option of working on and contributing to the Upper school magazine called *Kickin' It Quarterly.*

AMERICAN LITERATURE – 1.0 CU

This course will survey selected American authors representing the major periods, schools and traditions in American literary history. Our texts will span the pre-colonial eras (before European colonization in the 1600's) to our contemporary era; include multiple genres (fiction, nonfiction, poetry and drama). Some attention will also be paid to the historical/cultural contexts of the literary periods. There will be an additional emphasis on increasing vocabulary and improving writing skills.

BRITISH LITERATURE – 1.0 CU

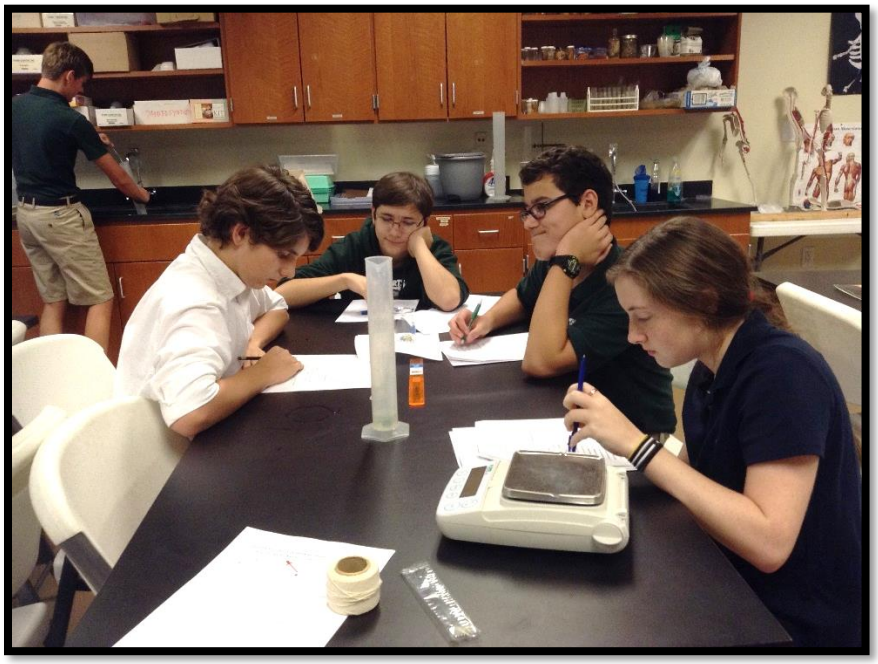
This course chiefly involves reading and discussing selected works of British Literature with an additional emphasis on increasing vocabulary and improving writing skills. Students will become familiar with the major events and movements that have influenced British Literature. It traces historical, social, and cultural forces that have shaped British Literature from the Anglo-Saxons and Beowulf to the Romantic poets and Victorian writers. The focus will be on literacy merit and Shakespearean dramas, and Romantic poetry will be closely examined.

COMMUNICATION ARTS (CA) WORLD LITERATURE – 1.0 CU

World Literature uses selections from Africa, Ancient Greece, Europe, Asia, Pacific, Latin American/Caribbean, and North America. Literary genres that are studied are the short story, drama, the novel and poetry. Responses to the reading include class discussions, study guide completion and group projects. Vocabulary skills are also developed from exercises related to the readings; through completing exercises in the *Vocabulary for Achievement* workbook; and learning correct usage of "Tricky Words" in *Building Your Vocabulary.* The *Write Source* textbook is utilized to teach writing in the context of the literature selections read. Four types of essays are taught: Narrative, Expository, Persuasive, and Creative. The 5 Step Writing Process and the 6 Traits of Good Writing are taught. Mechanics, usage, and grammar skills are improved by completing exercises in the *Skills Book*. We also use *Reading Counts* which is an individual reading program.

SENIOR RESEARCH AND COMPOSITION – 1.0 CU

A student will benefit most if he/she: *finds ways to complete materials, establishes and uses a support system that can transfer to another school, develops effective executive function skills, and meets or exceeds all required deadlines.* Students will: study quality literature, learn to question assumptions and argue a premise, learn to dissect difficult materials, learn to mark their textbooks in a meaningful way, take responsibility for developing a support network, build on writing skills and strategies already mastered, and polish research skills. Students will sharpen their skills in:
(a) Reading – fiction, nonfiction, research, efficient use of websites; (b) Rhetorical writing to explain, persuade, compare, contrast; (c) Response writing to literature selections of varied types; (d) Public speaking, Using talking software, if it benefits student; (e) Note taking – from lecture and from written materials, and in textbooks; (f) Citing sources in MLA form and avoiding plagiarism; (g) Using human proofreaders on a regular basis; (h) Honoring strict deadlines and experiencing logical consequences, Students will research an author online or in the textbook and will learn about the style and perhaps even the story summary before a book/written work is read. Students will analyze, compare, contrast, and critique the works of various authors.



MATH

ALGEBRA I – 1.0 CU

Algebra I concentrates on problem solving. This course includes: solving equations, word problems, reasoning skills, the language of algebra, patterns and functions, the real number system, integers, rational numbers and inequalities. Students begin the year learning about expressions and using the Number Properties. Students will review the use of exponents and begin to use logical arguments to justify the steps to a Word Problem. Students will solve multi-step inequalities. The teaching strategies employed in this course are both group and individual, attempting to provide each student the opportunity for instruction and for the solution of everyday problems. Each student will be given many opportunities to master the material presented to him or her, and special emphasis will be given to developing and reviewing the material learned in the previous Math course.

ALGEBRA II – 1.0 CU

Algebra II is the second course of Algebra offered at MSA. It is designed to (1) provide a review and deeper study of the concepts covered in Algebra I and (2) cover the more advanced algebraic concepts required to progress through the high school mathematics curriculum and succeed in college. The course incorporates the use of the TI-83 (or higher) graphing calculator for discovery, problem solving, and modeling. Paper-and pencil methods for simplifying expressions, solving equations and functions, and graphing are taught before using the calculator to “get the answers” to ensure students' basic understanding of algebra. Students can use their calculators at all times during this course, including during all quizzes and tests for basic calculations.

CALCULUS – 1.0 CU

In the Calculus course, students will utilize deductive reasoning and algebraic tools to expand their knowledge of Algebra and Trigonometry. The major topics of the course are Differentiation, Applications of Differentiation, Integration, Differentiation and Integration of Transcendental Functions, Applications of Integration, and Integration Techniques. This course will integrate procedural knowledge (calculation, measurement, formulas and data) and conceptual knowledge (algebraic functions, problem solving strategies, reasoning and number sense). We will also work to make connections to real-life applications of mathematics.

GEOMETRY – 1.0 CU
Geometry involves working with Inductive Reasoning and identifying and drawing models of points, lines and planes. We will apply the properties of real numbers to the measure of segments, name and identify parts of an angle, and identify and use complementary and supplementary angles. We will explore triangles, quadrilaterals and midpoints and the properties of parallel lines. We will work with the slope of a line and identify Congruent Triangles. The teaching strategies employed in this course are both group and individual, attempting to provide each student the opportunity for instruction and for the solution of everyday problems. Each student will be given many opportunities to master the material presented to him or her and special emphasis will be given to developing and reviewing the material learned in Algebra I.

PRE-CALCULUS – 1.0 CU
The goals of Pre-Calculus are 1) to further students' algebraic abilities and to prepare them for calculus, finite mathematics, and other advanced mathematics courses, 2) to show students how algebra and trigonometry can model and solve authentic real-world problems, and 3) to continue to develop problem-solving and critical thinking skills. The course will address all learning styles and will utilize all methods of presentation including: lecture, TI-83 (or higher) graphing calculator, laptops, Smart Board notes, and the internet.

ADVANCED ALGEBRA/TRIGONOMETRY – 1.0 CU
The course is designed to expand on the topics covered in Algebra II. The topics include a study of sequences and series, basic statistics and probabilities, quadratic functions and transformations, exponential functions, inverses, and logarithmic functions. Students will explore functions, learn problem solving techniques, and develop mathematical knowledge and skills that will prepare them for college mathematics courses.

STATISTICS - 0.5 – 1.0 CU
Introduction to Statistics helps students gain mastery of the basic principles of statistics. In this course, students will learn a variety of topics, including statistical principles, research methodologies, data analysis, and hypothesis testing, and will also have the opportunity to demonstrate the application of these topics in statistics to everyday situations.

SCIENCE

BIOLOGY– (Lab Science) 1.0 CU
Biology is designed to develop student understanding and competence in topics such as ecosystems, DNA, RNA, plants, reproduction, animals, and current research on the human genome project. Labs and field work are an essential part of this science course. Students perform labs to reinforce the concepts presented in class and to develop safe lab skills and practices. All labs are written up utilizing the scientific method.

CHEMISTRY– (Lab Science) 1.0 CU
This course offers a solid understanding of the fundamentals concepts of chemistry. Students will study properties of matter, elements, chemical reactions, and the periodic table. Concepts and skills are reinforced by a strong emphasis on hands-on laboratory experiences and the integration of other branches of science. In Chemistry, students will develop an understanding and competence in such topics as stoichiometry, chemical reactions and bonding, reaction kinetics, thermochemistry, oxidation reduction reactions, electrochemistry, nuclear chemistry, solutions, and introductory organic chemistry.

PHYSICAL SCIENCE - (Lab Science) 1.0 CU
This course introduces the general principles of physics and chemistry. Topics include measurement, motion, and Newton's laws of motion, momentum, energy, work, power, heat, thermodynamics, waves, sound light, electricity, magnetism, and chemical principles. Upon completion, students should be able to demonstrate an understanding of the physical environment and be able to apply the scientific principles to observations experienced. Laboratory work reinforces the principals discussed in lecture.

PHYSICS – (Lab Science) 1.0 CU
The Physics Curriculum is designed to evolve from the concepts students learn in grades K-8 to a fuller understanding of the physical world around us. The curriculum covers kinematics, including velocity, acceleration, force, and momentum, matter and energy, including energy transformations, electricity and magnetism, and waves and nanotechnology.

Students investigate physics concepts through experience in laboratories and field work using the processes of inquiry. Students will use scientific tools to record investigations clearly and accurately, use appropriate units, organize data into tables, charts, and graphs, make calculations to analyze and interpret those data, and recognize the importance of explaining data with precision and accuracy.

SCIENCE ELECTIVES

Note: Students are welcome to take more than one elective science. These electives may be chosen to meet the science elective requirement (1.0) as well as to fulfill general elective credit (1.0).

ANATOMY AND PHYSIOLOGY – Lab Science (yearlong elective) – 1.0 CU

In Anatomy and Physiology, students will learn the basic terminology that highlights the differences between Anatomy and Physiology; chemical structure of cells, types and functions of the tissues, nervous, heart, blood, endocrine system, circulation, skeletal, muscular and reproductive systems, and the basics of human development. Emphasis is placed on the interrelationship between the systems of the body and how they maintain homeostasis. Labs and field work are an essential part of this science course. All labs are written utilizing the scientific method. Students are also updated with the current events and information through class discussions and the internet.

ENVIRONMENTAL SCIENCE – Lab Science (yearlong elective) – 1.0 CU

Investigations in Environmental Science is a curriculum based on the challenges of maintaining sustainable resources to support the demands of a growing population. It covers environmental science in the context of real-world cases of land-use, energy and water resources management. The course places the student in the role of an Environment Scientist. They are engaged in investigations of realistic problems in which they must make recommendations. Land Use focuses on population and resources, with a content emphasis on land use and ecology. Students investigate the challenges of land-use planning to minimizing impact on threatened ecosystems. As the earth's population continues to grow, there are many questions as to how we can sustain the world we live in. Energy Generation focuses on the growing demand for energy with emphasis on fossil fuels and its effects on climate change. Students will explore alternative methods of generating electricity. Global warming has become a grave concern due to greenhouse gases produced by by-products of coal and oil. Are we serious about renewable energy if we incorporate new drilling techniques such as fracking? How will mankind move away from coal and oil as primary energy sources? Water Management is a case-based approach on the study of water resources. Students will learn about the relationships between water and soil: erosion, permeability, porosity and percolation. There is a direct relationship between population growth and water demand. How much water is wasted? What steps should we take to make the best use of water? What is the impact of pollution on our water?

FORENSIC SCIENCE – Lab Science (yearlong elective) – 1.0 CU

Forensic Science is the application of scientific knowledge to questions of civil and criminal law. This course is a lab-based, hands-on course that will explore what forensic scientists do. Students will learn modern forensic methods and use scientific methods to solve legal problems. The Forensic Science curriculum builds upon science concepts and how to apply science to the investigation of crime scenes. Students will learn the scientific protocols for analyzing a crime scene; how to use chemical and physical separation methods to isolate and identify materials, how to analyze biological evidence and the criminal use of tools, including impressions from firearms, tool marks, arson, and explosive evidence. This course will focus on collection and analysis of crime scene evidence (such as serology, toxicology, entomology, odontology and trace evidence), and explore lab analysis techniques, (such as chromatography, DNA analysis, fingerprinting, and hair and footprint analysis). Since forensic scientists are also required to testify in court about their methods and analysis of evidence, the students will learn how forensic scientists clearly and concisely explain the results of the labs and techniques they use, and how they explain the significance results in lab reports. Finally, mock crime scenes will be investigated and real case studies analyzed.

SOCIAL STUDIES

WORLD HISTORY– 1.0 CU
This course surveys the history of the world from Early Civilizations to the world today. The course moves progressively along in a time-line from the emergence of early humans to the present day. World History links chronology, themes, and geography within the units of study. Each unit emphasizes themes such as urbanization, religion, or trade, and students learn to use themes to analyze historical events and to develop a grasp of the chronology of human development. Geographically, the entire globe is covered although specific topics place greater emphasis on specific regions.

CIVICS – 0.5 CU
This course surveys the government of the United States from early America to current times. We will be studying topics such as: Origins of American government, the Constitution, Federal System, Congress, The Presidency, Federal Bureaucracy and the Political Party system. Students will sharpen their skills in: (a) Reading – nonfiction though text book, research, websites; (b) Research – recognize hidden agendas, spot opinions, organize data; (c) Rhetorical writing to explain, persuade, compare, contrast; (d) Response writing to opinion questions in selections of the textbook; (e) Long range research paper planning; (f) Note taking practice – from lecture and from written materials; and (g) Honoring strict deadlines and experiencing logical consequences.

ECONOMICS– 0.5 CU
The goal of the Economics course is for the student to demonstrate an understanding of basic economic concepts. Students become familiar with the economic system of the United States and how it operates. They also explore the roles of various components of the American economic system. Students examine their roles as consumer, worker, investor and voting citizen. Topics of discussion include the Stock Market, comparative economic systems, and the impact of political and social decisions on the economy with regard to both Macroeconomics and Microeconomics.

AMERICAN HISTORY– 1.0 CU
American History covers Pre-Colonial America through the time of Expansion and Spanish/U.S War to present day America. The course will focus on the principles that are the basis of American society, culture and government, and fiscal and international policy. Students will examine direct and indirection causation of major events, such as colonization, the struggle for American Independence and the Revolutionary War, The Civil War, Reconstruction/Industrialization, The World Wars, Economic Boom and Bust of the 1920s-1940s, and the various roles of the United States during the Cold War. This class will also examine how these events correlate with societal roles, with particular regard to religion, education, and race relations.

WORLD GEOGRAPHY– 0.5 CU
The goal of World Geography is for students know where important places are in the world. In this course, we will focus on identifying and locating the continents, regions, major bodies of water, and map reading, to include but not limited to longitude and longitude. Students will focus on identifying the location of important countries, regions, and cities within North/Central America, Europe, Africa, Asia, and South America, especially with regard to current events.