



# The Harley School

*Established 1917*

## Middle School Curriculum

Harley students make the transition to Middle School their fifth grade year. This allows for a period of time to adjust to the changes in classroom structure, responsibilities, and schedule. Once students reach sixth grade, they find themselves in a familiar environment while continuing to be challenged.

We offer small classes and individual attention, a challenging, hands-on learning environment where students frequently work in groups, and a wide range of co-curricular opportunities with a strong emphasis in the creative and performing arts. Because Harley understands the importance of balance, we also strongly emphasize experiential learning and STEM--the result is a well-rounded education that provides students the freedom to express while equipping them to truly understand.

We have a dedicated faculty who work with middle schoolers by choice and who, by understanding 10–14 year olds, embrace the notion that children this age mature at different rates and therefore may have distinctly different learning patterns.

Harley's program also has strong roots in traditional education. We believe students need to learn and master certain skills to be successful in high school, college, and adulthood.

To that end, our classroom instruction and curricula strongly emphasize these skills: reading, writing, oral communication, research, problem solving, mathematical computation and reasoning, scientific inquiry, computer literacy, and proficiency in a second language. Finally, our middle school is a community in which personal responsibility is stressed and students are expected to contribute positively to the daily life of the school. Standards for conduct and behavior are high, and students are asked to observe a school-wide code of "rights and responsibilities." Our goal is to maintain a healthy and safe learning environment where mutual respect and civility are valued and practiced.

# Humanities

## ENGLISH

### **Grade 5**

Grade 5 English focuses on the three core elements of the English language: grammar, reading and writing. Students review and reinforce basic skills in spelling, grammar, vocabulary, dictionary usage, reading and composition. Grade 5 English introduces basic research skills and the use of reference materials to aid students in writing reports. Students broaden their comprehension through a variety of novels. Through these novels, students work on characterization, plot, setting, and theme while improving comprehension and vocabulary. Students learn to edit, revise, and proofread their written work, which is based on the elements in the novels and literary genres. Students entering Middle School learn to build a relationship with the text through class discussion and annotations in the text itself. Students continue to develop skills introduced in previous grades. Students also explore the use of figurative language in writing and the basic elements of poetry.

### **Bibliography**

O'Dell, Scott. *Sing Down the Moon*. Boston: Houghton Mifflin, Harcourt. 1970. Print  
Hiaasen, Carl. *Hoot*. New York: Alfred A. Knopf, 2002. Print.  
Lowry, Lois. *Number the Stars*. Boston: Houghton Mifflin, 1989. Print.  
Raskin, Ellen. *The Westing Game*. New York: Scholastic, 1978. Print.  
Ryan, Pam Munoz. *Esperanza Rising*. New York: Scholastic, 2000. Print.  
George, Jean Craighead. *My Side of the Mountain*. Puffin Books, 1998. Print

### **Grade 6**

Grade 6 English continues to strengthen and build upon the foundation set in place by the fifth grade study of the English language. Students broaden comprehension by reading a variety of novels. Through these novels, students work on characterization, mood, and theme, improving comprehension and vocabulary. Students learn to recognize all eight parts of speech in fifth grade; and begin to understand the usage of these elements and the essential part they play in sentences. Students begin an in-depth study of grammar by focusing on subject-verb agreement, sentence structure and editing usage more carefully. Students continue to edit, revise and proofread written work that is based on literary genres and various types of writing. Students further explore the use of figurative language in writing and the basic elements of poetry.

### **Bibliography**

Curtis, Paul. *The Watsons Go to Birmingham*. New York: Random House, Yearling Press, 1963. Print.  
Law, Ingrid. *Savvy*. New York: Penguin Group, 2008. Print.  
Mass, Windy. *Jeremy Fink and the Meaning of Life*. New York: Little, Brown and Company, 2006. Print.  
Rawls Wilson, *Where the Red Fern Grows*. New York: Random House, Yearling Press, 1996. Print.  
Spinelli, Jerry, *Who Put that Hair in My Toothbrush?* NY, Little, Brown & Company, 2000, Print  
Avi, *Nothing but the Truth*. New York Scholastic 2010, Print

### **Grade 7**

Students in Grade 7 English read a variety of genres including a play, short stories, poetry, fiction, and historical fiction. Seventh grade also marks the first year our English students study Shakespeare. The approach to studying the literature includes many techniques: small and large group discussions, cooperative group work, and independent written responses with a broad range of assignments. Students write daily in class on literature using an array of styles: creative, persuasive, descriptive, narrative, expository, and literature response. The students learn about the structure of paragraphs and essays, organization, voice, content, word choice, sentence fluency, and conventions of language. Each class begins with a poem. Grade 7 is the first year of letter grades and exams. Representative texts include:

#### **Bibliography**

Anderson, Halse. *Fever-1793*. New York: Simon & Schuster Books for Young Readers, 2002. Print  
Collins, Billy. *Poetry 180: A Turning Back to Poetry*. New York: Random House, 2003. Print  
Hinton, SE. *The Outsiders*. New York: Viking Press, Dell Publishing, 1967. Print  
Lowry, Lois. *The Giver*. Boston: Houghton Mifflin, 1993. Print  
Pollan, Michael. *The Omnivore's Dilemma: The Secrets behind What You Eat, Young Reader's Edition*, New York: Penguin Group, 2009. Print  
Shakespeare, William. *Macbeth*. England, 1603-1607. Print  
Taylor, Mildred. *Roll of Thunder, Hear My Cry*. New York: Penguin Group, Dial Press, 1976. Print

### **Grade 8**

Grade 8 English students read from many genres including plays, short stories, poetry, and fiction. The approach to studying the literature varies, including large and small group discussion, cooperative group work, and independent written responses to a broad range of assignments. Students write daily in class on the literature introduced, using a variety of styles including: creative, persuasive, descriptive, narrative, expository, and literature response. Grade 8 students learn about the structure of paragraphs and essays, organization, voice, content, word choice, sentence fluency, and conventions of language. Representative texts include:

#### **Bibliography**

Cisneros, Sandra. *The House on Mango Street*. New York: Random House, 1991. Print  
Collins, Billy. *180 More: A Turning Back to Poetry*. New York: Random House, 2003. Print  
Dickens, Charles. *A Christmas Carol*. England, 1843. Print  
Keyes, Daniel. *Flowers for Algernon*. San Diego: Houghton Mifflin Harcourt, 1966. Print  
Lee, Harper. *To Kill A Mockingbird*. New York: HarperCollins, 1960. Print  
Shakespeare, William. *Othello*. England, 1603. Print  
Zusak, Markas. *The Book Thief*. New York: Knopf, 2006. Print

## **WRITING**

### **Grade 5**

Grade 5 students are required to take a one-trimester course which focuses on writing, word study, and speaking skills. Students practice working through the writing process, developing paragraphs with a topic sentence supported by detail; and experiment with a variety of genres (biography, science fiction,

fantasy, etc.) and styles (expository, narrative, explanatory, etc.). Through daily editing practice, students learn the key strategies for improving the written word. Word study includes prefix and suffix meanings, word derivation; and homonyms, antonyms, and synonyms. The course supports the continued acquisition of the student's ability to understand and use the English language.

## **HISTORY**

### ***Grade 5***

History at the fifth grade level emphasizes the connections between physical geography and social, cultural, and economic factors. Throughout the year, students learn basic geographic concepts and skills. The initial concepts include absolute and relative location, the physical and human characteristics of different places, the interaction humans have with their environment, the movement of people, goods and ideas, and how a region is defined. These concepts are consistently referred to as the students work their way through Mexico and North America. Students also examine the Maya, Aztec, and Inca civilizations. Particular attention is paid to systems of government, religion, agricultural methods and the cause of a civilization's decline. North American studies focus primarily on the major regions of the United States, combining geography, history, and the relationships between environment and culture. Grade 5 students study maps and engage in many activities that focus on latitude, longitude, hemispheres, time zones and landforms.

### ***Grade 6***

History at the sixth grade level focuses on ancient civilizations. The year begins with a look at how scientists use archeology to uncover and explain evidence of the human past. Students continue with a look at the most important of all changes, the Agricultural Revolution. Students explore why hunter-gatherers settled down and began to farm and the impact farming had on people's lives. Most of the sixth grade year is spent exploring the earliest major civilizations of many regions of the world. The study of the development of agriculture, government, communication, social system, and religion shapes students' views of ancient civilization. Course work covers Egypt, Mesopotamia, China, and India. As students look at each civilization, they compare development among each group, gradually understanding a list of key evolutionary elements—the essential building blocks of all early civilizations. Sixth grade History introduces students to the systematic study of ancient civilizations.

### ***Grade 7***

Grade 7 History explores the United States from pre-Columbian Native American culture through the Civil War. Particular attention is paid to the collision of cultures as Native Americans encountered new arrivals from Europe, the alienation of American colonists from the British government, the post-independence creation of a new political order, the Jacksonian expansion of democracy, sectional tensions over the question of slavery, and the Civil War. Seventh grade is the first yearlong chronological treatment of a single topic, rather than a series of separate units. Grade 7 is also the first year of cumulative exams and letter grades. Students take a midterm exam in February that covers the first half of the year, and a final exam in June covers the second half of the year. The class is marked by an important shift away from in-class projects and games, in favor of discussion and debate. Extensive use is made of source documents, paintings and photographs, documentary films, and music. Homework is more frequent and demanding. A variety of methods is used for managing reading assignments

including: summaries, notes, outlines, timelines, and short essays. The class also keeps track of current events.

### **Bibliography**

Bowe, Bert; Lobdell, Jim. *History Alive! The United States*. New York: Teachers' Curriculum Institute, Columbia Teachers College, 2002. Print.

### **Grade 8**

Eighth graders learn about modern Africa, Asia, and Latin America, looking for patterns that help us understand why there are rich and poor countries. We will compare two theories about the origins of wealth differences throughout the year, Jared Diamond's theory of Guns, Germs, and Steel, and Daron Acemoglu and James Robinson's competing theory from their book, Why Nations Fail. We not only encourage discussion, but students are expected to participate in class discussion.

The course begins with a look at rich and poor countries in the world today, and then turns to European exploration between 1480 and 1850. What compelled exploration? Why were peaceful trade relations established in some regions, while attacks were more common in others? How and why did some groups dominate others? How did exploration and colonization shape the current world order? In each region, case studies are presented to highlight aspects of people's experiences.

The history of Latin America is revisited, building on the introduction from the previous year. Students explore how North and South America took divergent paths, the decline of dictatorships, and the rise of market economies. The study of Asia spotlights experiences in India and China. While studying India, students examine the role of Mohandas Gandhi's nonviolent rebellion against colonial rule and learn about the devastating effects of religious strife.

The China unit covers the decline of the ancient imperial system, the period of turmoil that followed, and the replacement of the old system with Communism. Students also learn about China's incredible growth over the past 30 years and the problems resulting from that rapid change.

The study of Africa focuses on Kenya, South Africa, and South Sudan. Students view three films in the course to develop a more personal understanding of how big events shape the lives of typical people. Considerable class time is devoted to current events. Eighth grade history is taught in a seminar format, favoring discussion during class time.

### **Bibliography**

Beck, Roger B.; Black, Linda; Krieger, Larry S. *Modern World History – Patterns of Interaction*. San Diego: Houghton Mifflin Harcourt, 2002. Print.

Diamond, Jared M. *Guns, Germs, and Steel: The Fates of Human Societies*. New York: W. W. Norton & Company, 1999. Print.

Acemoglu, Daron; Robinson, James. *Why Nations Fail*. New York: Crown Business, 2012. Print.

Park, Linda Sue. *A Long Walk to Water*. Boston: Clarion Books, 2010. Print.

## Media

*Gandhi*. Dir. Richard Attenborough. Perf: Ben Kingsley, John Gielgud, and Candice Bergen. Goldcrest Films, 1983. Film.

*To Live*. Dir. Yimou Zhang. Perf. You Ge, Li Gong, Ben Niu. Shanghai Film Studios, 1994. Film.

*The Mission*. Dir. Roland Joffe. Perf. Robert De Niro, Jeremy Irons, Ray McAnally, Warner Bros., 1986. Film.

## FOREIGN LANGUAGE

The Middle School foreign language curriculum provides students a strong foundation for Upper School foreign language studies. All Middle School students are required to study a foreign language. Fifth grade students are introduced to foreign language with one trimester of French and one trimester of Spanish. The goal is to enable students to make an informed decision before choosing the individual language studied during sixth, seventh, and eighth grades. Students focus on grammar, history, and culture while working on speaking, listening, reading, and writing. In eighth grade, students are also required to take a one-trimester introductory course in Latin, in addition to the French or Spanish course. This introduction to Latin helps students make a more informed decision of which language to continue in Upper School: Latin, Spanish, or French.

	Regular Sequence	Requirement
<b>Grade 5</b>	French and Spanish	1 Trimester of each language.
<b>Grade 6</b>	French or Spanish	3 Trimesters of selected language.
<b>Grade 7</b>	French or Spanish	3 Trimesters of selected language.
<b>Grade 8</b>	French or Spanish, and Latin	3 Trimesters of selected language and 1 Trimester of Latin.

## French

### *Grade 5*

Students gain an understanding of French in this trimester course. Previous experience with the language is not required. Students learn basic vocabulary and grammatical structures. Topics of vocabulary study include greetings and introductions, physical and personality descriptions, school, family, food, and numbers. The course allows students to practice the five areas of a foreign language: reading, writing, listening, speaking, and culture. These areas of study are reinforced through in-class activities including role-play, skits, projects, games, cooperative activities, and videos. Successful completion of homework assignments also plays a role in the student's performance.

**Textbook**

*Bon Voyage 1*, New York: New York: McGraw-Hill, 2001. Print.

**Grade 6**

In this full-year course, the students begin the required French sequence that continues through Grade 11. In French 6, students begin the year with a review of material from French 5. The course allows students to continue their practice of the five areas of a foreign language: reading, writing, listening, speaking, and culture. These areas of study are reinforced through in-class activities including role-play, skits, projects, games, cooperative activities, and videos. Successful completion of assigned homework plays a significant role in the student's performance on assessments. It is recommended that students complete a summer packet in preparation for review in French 7.

**Textbook**

*Bon Voyage 1*, New York: New York: McGraw-Hill, 2001. Print.

**Grade 7**

In French 7, students begin the year with a review of material from French 6 and the summer packet. Students continue to work with the text, *Bon Voyage*; students should complete chapters 6-11. The curriculum includes themes related to shopping at indoor and outdoor markets, clothing, and summer vs. winter activities. Students begin to explore grammar usage, practicing five areas of a foreign language: reading, writing, listening, speaking, and culture. The greatest emphasis is placed on writing and speaking. Students practice writing short compositions in the target language. Successful completion of assigned homework, daily review of grammar and vocabulary, and in-class participation and preparation play a significant role in the student's performance on assessments. There is a final exam in June. An overall average of 73% is required to move to the next level of study in foreign language. Students should complete a summer packet in preparation for review in French 8. Grade 7 is the first year of letter grades and exams.

**Textbook**

*Bon Voyage 1*, New York: McGraw-Hill, 2001. Print.

**Grade 8**

In French 8, students begin the year with a review of material from French 7 and the summer packet. The curriculum includes lessons on cultural and leisure activities, health and medicine, telecommunications, travel, the bank and post office, and gastronomy. Grade 8 students continue the practice of the five areas of a foreign language: reading, writing, listening, speaking, and culture. The greatest emphasis continues to be placed on writing and speaking. Students routinely write compositions and make presentations. Successful completion of assigned homework, daily review of grammar and vocabulary, and in-class participation and preparation play a significant role in the student's performance on assessments. There is a final exam in June.

**Textbook**

*Bon Voyage: Level 2*, New York: McGraw-Hill, 2001. Print.

**SPANISH**

### ***Grade 5***

Grade 5 students gain an understanding of the study of Spanish in the Middle School environment in this trimester course. Previous Spanish experience is not required. Students are introduced to the basic sounds and flow of the language as well as the geography and cultures of the Spanish-speaking world. Students practice the four skill areas of listening, speaking, reading, and writing. Class members are encouraged to be actively engaged in a variety of learning situations, which include dialogues and skits, cooperative learning groups, personal presentations, games, and various full-class interactive exercises. Students are introduced to basic grammatical structures and vocabulary. Topics covered are: the alphabet, greetings/farewells, learning to say where you are from, days of the week, months of the year, seasons, weather patterns, and the verb “to like.” Instruction is conducted in context so that the students make connections between their own culture and the Hispanic culture as they learn the language.

### ***Grade 6***

Sixth grade begins a yearlong Spanish sequence that continues through Grade 11. Prior knowledge of Spanish is not required. The skill areas: listening, speaking, reading, and writing are addressed at a foundation level. Students actively engage in a variety of learning situations, which include: dialogues and skits, cooperative learning groups, personal presentations, games, and various full-class interactive exercises. Students are responsible for regular homework preparation and independent home study/review. There are regularly announced quizzes and tests and/or projects to assess understanding of and ability to actively apply the material. Students study and practice the following topics: the alphabet, greetings and farewells, introduction of self and others, the contrast of formal versus informal address, numbers from zero to one hundred, days and dates, personal description, family relationships, clothing, house items, and school materials. Major grammar concepts include: gender of nouns, agreement of articles and adjectives, subject pronouns, and the conjugation of regular and irregular verbs, possession, and word order for statements and questions.

### **Textbook**

*Así Se Dice*, New York: McGraw Hill, 2010. Print.

### ***Grade 7***

The Grade 7 Spanish class begins the year with a review of material covered in Grade 6 using the summer packet and other teacher-produced materials. Emphasis is placed on improvement of the students’ pronunciation and comprehension of both written and spoken Spanish. Students are responsible for regular homework preparation and independent home study/review. There are regularly announced quizzes and tests and/or projects to assess understanding of and ability to actively apply class material. Classroom activities continue to include oral drills, written exercises, role playing/dialogues, games, and videos. During the course, students encounter more complex grammar/syntax, including: the recent past, the future tense, object pronouns, stem-change verbs; comparison of adjectives; regular informal affirmative commands; and conjugation of regular and irregular verbs. The vocabulary for this course includes: food and restaurant, weather, seasons, clothing, sports, and transportation. Students continue to expand awareness of the Spanish-speaking world via current events, music, literature in translation, and movies. Grade 7 is the first year of letter grades and exams. There is a final exam at the end of the year. Students must attain an overall minimum year’s average of 73% to move onto the next level of study.

**Textbook**

*Así Se Dice*, New York: McGraw Hill, 2010. Print.

**Grade 8**

The Grade 8 class year begins with a review of the material covered in Grade 7 using the summer packet, the text, and other teacher-produced materials. Emphasis is placed on continued improvement of the students' pronunciation and comprehension of both written and spoken Spanish. Students are responsible for regular homework preparation and independent home study/review. There are regularly announced quizzes and tests and/or projects to assess understanding of and ability to actively apply material. Classroom activities continue to include oral drills, written exercises, role playing/dialogues, games, and videos. Students encounter even more complex grammar/syntax, including: irregular affirmative and negative commands, object pronouns, reflexive verbs, superlative adjectives, demonstrative adjectives and the preterit (simple past) tense. The vocabulary for this course includes health, vacations, pastimes, travel, ordering in a restaurant, and personal grooming. Grade 8 expands on awareness of the Spanish-speaking world via current events, music, literature in translation, and movies. There is a final exam at the end of the year. Students must attain an overall minimum year's average of 73% to move onto the next level of study.

**Textbook**

*Así Se Dice*, New York: McGraw Hill, 2010. Print.

**Latin****Grade 8**

Latin 8 is intended to provide students with a brief introduction to the study of Latin. Eighth grade students take Latin every B day for one trimester. This is a beginning course that covers basic grammar and vocabulary, derivative study, and various aspects of Roman culture, including daily life, history, and mythology. Evaluation is based upon participation in classroom exchanges, participation in prepared or spontaneous oral exercises, homework, writing exercises, group and individual projects, quizzes, tests, and student notebooks. Brief homework assignments are given daily at this level.

**Textbook**

*Ecce Romani*, New York: Pearson USA, 2009. Print.

# Science, Technology, Engineering & Mathematics (STEM)

## MATHEMATICS

	<b>Regular Sequence</b>	<b>Accelerated</b>
<b>Grade 5</b>	Math 5	
<b>Grade 6</b>	Math 6	Pre-Algebra
<b>Grade 7</b>	Pre-Algebra	Algebra
<b>Grade 8</b>	Algebra	Geometry

### **Grade 5**

Addition, subtraction, multiplication, and division of whole numbers, fractions, and decimals are taught. Geometry, probability, percents, proportions, and ratios are introduced. Graphing is done as an enrichment activity, as are the Math Olympiads and special projects given to the students during the course of the year. Topics include: number theory, estimation and calculation; geometry exploration, fractions, decimals and percentages; collecting and working with data, division, ratios, exponential notation, coordinates, perimeter area and volume; algebra concepts and skills; and ratios, proportions, percentages; and some probability. Lessons are presented and reinforced in the classroom by using practice materials. Homework is assigned each class and is reviewed the following session. Projects are done in class with one or two partners, and the work is supervised and evaluated as the year progresses. Games and activities are used as motivational tools to keep the students solid in their facts and interested in math. Math Olympiads are given frequently for practice to challenge the children's abstract reasoning skills. Grade 5 students are entered into the monthly contests throughout the winter.

### **Textbook**

*Math Gr 5* Boston, Massachusetts: Houghton Mifflin, 2005. Print.

### **Grade 6**

The curriculum for Grade 6 is similar to Grade 5, but incorporates more sophisticated algorithms, and prepares students for formal algebra. The content of the course is mainly pre-algebra, but also emphasizes advanced arithmetic and pre-geometry. However, it differs from typical pre-algebra courses in its strong emphasis on application of elementary algebraic and geometric concepts and skills to the solution of real-world problems, with additional attention to the historical/cultural origins of modern mathematics. It also incorporates computer applications and the use of diverse modes of representation of mathematical relationships. Two major projects, the Million Dollar Project in the fall, and the Games Project in the spring, are integrated into the curriculum. Concepts from probability are also introduced and reinforced. Olympiads supplement course work. Similar to the previous course, Grade 6 students are entered into the monthly contest throughout the year.

**Textbook**

*Math Gr 6* Boston, Massachusetts: Houghton Mifflin, 2005. Print.

*Pre-Algebra*. Upper Saddle River, New Jersey: Prentice Hall, 2004. Print.

**Grade 7**

Students explore various topics in algebra and geometry in greater depth. The content of the course could generally be described as applied arithmetic, pre-algebra and pre-geometry. The course introduces students to the methods of algebra, including factoring, solving algebraic equations, and graphing linear equations. At the same time, students apply these methods to real world problems. The course incorporates topics from statistics, game theory, and applied mathematics. In addition to studying and applying algebra, students also examine some of the ideas in the field of geometry. Topics include area and volume, right triangles, trigonometry, and spatial thinking. Accelerated students complete the algebra course (see Grade 8) in one year. Grade 7 is the first year of letter grades and exams.

**Textbook**

*Pre-Algebra*. Upper Saddle River, New Jersey: Prentice Hall, 2004. Print.

**Grade 8**

In this course, students learn to evaluate, simplify, and factor algebraic expressions, to solve linear equations, inequalities and quadratic equations, and to manipulate and simplify exponential and radical expressions. Additionally, students are taught how to apply these principles to solve real-world problems and to develop strategies for decoding and solving word problems. The goal for the class is to go beyond learning the basics and to prepare the students for success in future math classes and beyond. Students engage in both independent and group work. Students are expected to work through the following skills: problem solving, constructing and communicating well organized arguments, solving higher level problems, and collaborating with classmates.

**Textbook**

*Algebra*, 2<sup>nd</sup> Edition. Upper Saddle River, New Jersey: Prentice Hall, 2001. Print.

Accelerated students take a geometry course that challenges them to write original proofs and to apply algebraic principles to solve geometric problems. Students learn to apply deductive reasoning as a method to prove theorems associated with parallel lines and planes, congruent triangles, quadrilaterals, similar polygons, right triangles and circles. Students sometimes use the computer program Geometer's Sketchpad to discover geometric properties. Students also learn to construct basic geometric figures using a straightedge and compass and to find the areas and volumes of plane figures and solids. Additionally, it is hoped that students learn to appreciate the geometry of Euclid and see it as an ancient, yet still meaningful, way to look at the world.

**Textbook**

*Geometry*, Boston, Massachusetts: Houghton Mifflin, 2001. Print.

## SCIENCE

	<b>Regular Sequence</b>
<b>Grade 5</b>	General Science: Ecology
<b>Grade 6</b>	General Science: Earth Science
<b>Grade 7</b>	Scientific Branches: Life Science, Physical Science, Earth/Environmental Science
<b>Grade 8</b>	Physical Science: Chemistry and Physics (Lab-oriented)

### ***Grade 5***

Science 5 is a lab and activity-based general science program with a year-long emphasis on the study of the interactions between organisms and their environment. The application of environmental learning is demonstrated with a variety of projects related to global sustainability. Throughout the year, students utilize Allens Creek as an outdoor lab. The creek is used to explore biotic changes that occur in response to weather. Students discover the world's interconnections by studying individual species' biomes, and the overarching concepts of ecology. In class, students look at world and environmental issues, at times collaborating with schools in other areas. Additionally, all Grade 5 students complete research projects on alternative energy sources and endangered species. From life cycles and natural selection to weather and biomes, Grade 5 Science makes connections to the student's personal world.

### ***Grade 6***

Sixth grade students work with a wide range of general science concepts in a hands-on, project-focused program. The middle school earth science course is designed to give all students an overview of common strands in earth science including, but not limited to, meteorology, geology, astronomy, resources and the human impact on earth. This course provides the knowledge, skills and habits of mind needed for problem-solving and ethical decision making about scientific issues. The development of an ability to express science understanding in writing, as well as orally and graphically, is continually stressed. The course begins with a field trip to the Rochester Museum and Science Center, includes field trips to local outdoor sites and culminates with a three-day outdoor education trip in early May.

### ***Grade 7***

This course involves the study of many different life forms with emphasis on the progression from simple to complex systems. We will begin the year focusing on the structures and functions of cells and will end the year studying the human body. Heredity, genetics and evolution will fall in between these topics and homeostasis and interdependence will be stressed as we examine different life forms through a systems approach. Environmental sustainability topics and engineering challenges will be intertwined within each of these themes. This course offers students a hands-on and minds-on approach to learning life science where laboratory activities will both introduce and reinforce more abstract ideas. Students will practice a variety of scientific skills such as methods of inquiry, observational skills, teamwork skills and the

numerous techniques used in the scientific process to prepare them for their future course work in the Upper School.

### ***Grade 8***

“Physical Science” is a lab-oriented course for Grade 8 students focusing on concepts in chemistry and physics. The purpose of the course is to expose students to various modes of experimentation providing the foundation for laboratory work. Students begin by performing experiments which build upon and reinforce basic concepts of mass, volume, and density. From these beginning exercises, students develop an understanding of physical laws and how they interrelate. During the first half of the year, the course progresses through the classification of matter, the atomic model, and chemical bonding. The course transitions to physics where conceptual understanding grows from student experimentation with motion, velocity, and acceleration. As a result, students develop an introductory understanding of Newton’s laws of motion, energy, and energy sources. Engineering challenges are woven into the curriculum throughout the school year giving students multiple opportunities to work as a team on design challenges.

## **TECHNOLOGY**

### ***Grade 5***

Technology is a trimester course. The program emphasis is physical computing in a STEAM (science, technology, engineering, art, and mathematics) setting. Students design, program and build a variety of projects intended to provide educational experiences that “blur the lines between the physical and digital world.” Students write programs using different block-based programming languages allowing them to read sensor inputs from the measurement of various stimuli, and generate desired outputs. Programming presents students with the opportunity to create simple robots that react to sensors, giving students’ digital work a physical impact. During the course, students explore topics related to electronics and circuitry, process-based thinking (such as the scientific method and algorithm reasoning), teamwork, and design thinking. The outcomes of the technology course are dictated by the creativity of the students.

### ***Grade 6***

Technology is a trimester course for students. The program is set in the Commons building--a true STEM facility. Its emphasis is on developing a “maker mindset” in which students see the world as a place that can be modified, built upon, or created anew; addressing needs that they identify. Students gain the ability to see objects as “hackable.” Hackable experiences are different for every class as they are dependent upon individual student interests. Past examples of hackable learning experiences are: combining drinking straws and LEDs for light-up effects; designing rockets out of paper and tape that are capable of traveling 200-300 feet; designing a toy helicopter clamp on 3D modeling software and printing and using it. During the Technology trimester, students become creators, communicators and contributors by utilizing more traditional computer technologies to share ideas through digital processes.

### **Computer Skills**

Computer instruction is integrated into core course curriculum. Students visit the computer lab or use laptops in the classroom or the Library during English, history, science, foreign language, math, and music classes. The Internet, library databases, and online encyclopedias are resources throughout Middle School.

# The Arts

## **Visual Art**

Every Middle School student takes a trimester-long visual art class each year. Students engage in a variety of activities and projects designed to strengthen and expand skill, imagination, expression, creative problem solving and knowledge of artists and cultures. Freedom to explore, discover, initiate, communicate, and collaborate on projects is supported. Students engage in lively discussions and critiques in order to understand and enjoy the creative process. Students experience a variety of media within the disciplines of drawing, painting, sculpture, ceramics, printmaking, glass, photography, and digital art. Demonstrations in technique and effects are given. Students practice and apply the concepts inherent in aesthetic form and composition. Assignments are differentiated to allow for personal interpretation and individual success.

## **Music Ensembles**

*Note:* All Middle School students participate in a music performance ensemble: Chorus, Band, or Strings.

### ***Grades 5/6 Choir***

Grades 5 and 6 choir students learn to sing pieces in a variety of styles, periods, and languages. The class emphasizes healthy vocal production, good diction, two-part independence, ensemble singing, musicianship, sight-reading, and basic music theory. Regular performances include the Fall Choir Concert, Candlelight, and the Middle School Spring Concert; concert participation is required.

### ***Grades 5/6 Band***

Grades 5 and 6 grade band focuses on the fundamentals of music and instrumental technique for wind, brass and percussion instruments. Students start to develop solid technique on their instruments, strive for beautiful tone, learn to read music, and work to play as an ensemble. Weekly individual or small group pullout lessons provide one-on-one instruction at each student's skill level. Students are encouraged to take advantage of playing opportunities such as the MCSMA solo festival, the NYSSMA solo festival, and All-County ensembles. Regular performances include the Informance, the Winter Band Concert and the Middle School Spring Concert. Regular practice is expected and concert participation is required.

### ***Grades 5/6 String Ensemble***

Fifth and sixth grade String Ensemble focuses on the fundamentals of music and bowed instrument playing technique. Weekly small group pullout lessons provide individual instruction at each student's skill level. Students learn to perform with correct posture and position. Note and rhythm reading are emphasized through the exploration of a variety of musical literature, including traditional, classical, world, and folk/fiddle music. Performances include the Winter Orchestra Concert and the Middle School Spring Concert. Regular practice is expected and concert participation is required.

### ***Grades 7/8 Choir***

7/8 Choir students learn to sing music selected from a variety of styles, eras, and languages. The class emphasizes healthy vocal production, good diction, three-part independence, ensemble singing,

musicianship, sight-reading, and basic music theory. Regular performances include the Fall Choir Concert, Candlelight, and the Middle School Spring Concert; concert participation is required.

### ***Grades 7/8 Band***

7/8 Band helps students to continue their development of individual technique and tone, as well as their ensemble playing skills. Students are expected to have at least two years of experience on their instrument, or to play at an equivalent level. The repertoire is more advanced, and regular independent practice is necessary. Students are encouraged to take advantage of playing opportunities such as the MCSMA solo festival, the NYSSMA solo festival, and All-County ensembles. Regular performances include the Fall Instrumental Concert, the Winter Band Concert, and the Middle School Spring Concert. Regular practice is expected and concert participation is required.

### ***Grades 7/8 Orchestra***

7/8 Orchestra is an opportunity for experienced string players to continue developing individual bowed instrument playing skills. Emphasis is placed on ensemble balance, posture, position, following conductor cues, and intonation. The repertoire is more advanced and regular independent practice is necessary. Performances include the Fall Instrumental Concert, the Winter Band Concert, and the Middle School Spring Concert. Regular practice is expected and concert participation is required.

### ***Grade 5 Music***

Fifth grade Music is a hands-on class that provides students with opportunities to enhance performing and music class experience. Listening skills are developed, and the instruments of the symphonic orchestra are researched. Students learn to read, write, and perform rhythms as well as explore American music history.

### ***Grade 6 Music***

Music 6 is a general music class that encourages students to create, analyze and discuss music while encouraging thought about music's connections to other topics. Units explored may include world music drumming, rhythmic improvisation, composition; critical listening and other units aligned with the 6<sup>th</sup> grade language arts reading material.

## **Drama**

The drama program encourages the students to develop their dramatic and performance skills. Students engage in a variety of theater games, playful warm-ups, improvisation, scene study and character development, which are all designed to strengthen their awareness of dramatic arts. All of the skills presented contribute to each student's developing self-confidence, cooperation and group-skill engagement, and problem-solving abilities. Individual student's strengths and talents are recognized and curriculum is adapted to highlight everyone's unique abilities.

### ***Grade 5***

Students are introduced to a variety of dramatic techniques including group building exercises, spatial and sensory awareness, pantomime, physical movement, voice and projection, improvisation, monologues, scene study, and stage combat. Basic stage and technical skills will be introduced. Dramatic skills are then practiced through improvisational skits and scenes, original plays, monologues, puppetry, and small showcases which highlight their work each trimester. The emphasis at this grade level is on playful development of theatrical skills.

**Grade 6**

Students continue their study of drama by reviewing technical aspects such as improvisational techniques, voice and projection, physicality, monologues and scene study. In Grade 6, study continues with individual units covering many different aspects of drama such as neutral mask, stage combat, mime, musical theater, history of theater, monologues, Shakespeare, and technical theater. Students will also learn to develop characters by exploring conflict, objectives and motivations, and plot structure. The semester will culminate in a showcase of their work.

**Grade 7**

Students begin the trimester reviewing technical aspects of acting such as improvisation, pantomime, voice and projection, physicality and character development. The trimester continues with specific units of study. For the 2014/2015 school year, playwrights and their works, speech and debate, scene writing and analysis, theater production, and reader's theater will be studied. Every trimester includes lots of improvisation and drama games that encourage and develop spontaneity in acting. Monologues and short scenes are also studied and developed. There is a performance opportunity at the end of each trimester.

**Middle School Production**

Every year the middle school performs a large scale theatrical production which includes up to 60 middle school students. This is usually a musical, as musicals allow for large casts. Over the last few years, the middle school has produced performances of a Rodgers and Hammerstein musical revue, an Evening of One-Acts, *Dear Edwina Jr*, *The Little Mermaid Jr*, and *Once Upon a Mattress*.

# Physical Fitness

## **Health**

The health program for Grades 5, 6, 7, and 8 prepares students to make good choices and informed decisions about a variety of health dimensions. Health focuses on strength based learning opportunities that include role-plays, class discussions, group work, active learning experiences, and group research on various topics.

### ***Grades 5/6***

In Grade 5, Health focuses on nutrition, bullying, and communication skills. The Drug Abuse Resistance Education (DARE) program is also included of the fifth-grade experience. The Brighton Police Department participates in 10 lessons worth of skill-based material. In grade 6, students explore personal nutrition habits, environmental influences, and skills in reading food labels. Growth and development/puberty will also be taught – exploring the various changes that take place during this time. A guest speaker will present the topic of safe touch and child abuse.

### ***Grades 7/8***

Health is a graded trimester class for grades 7 and 8. In grade 7, students will build on the nutrition material learned in grades 5 and 6. They will discuss the components of a living a healthy lifestyle as it relates to nutrition and physical activity. Students will participate in a group research project on a lifestyle disease and present information to the class. The 7<sup>th</sup> graders will also be participating in the “Adopt-a-Grandparent” program at the Friendly Home five times during the trimester. Visits will focus on empathy and relationship skills. In grade 8, a major focus will be on mental health. Students will explore various mental health topics such as stress, mental health disorders, teen depression, and suicide prevention. The class will also practice many different stress management techniques – including aromatherapy, progressive muscle relaxation, visualization, etc. Students will participate in a group research project/presentation during the drugs and alcohol portion of the trimester. We will cover addiction and teen brain development. A guest speaker will present the topic of sexual harassment. Students will also be responsible in finding current health issues in the media, which will be discussed at various points throughout the course.

## **Physical Education And Athletics**

Students are expected to attend and participate in all physical education classes. The Middle School physical education program provides opportunities for students to develop skills through a variety of individual and team sports. In both physical education and athletics, the most important factors are participation, good effort and fair play. The main objective is to allow students to develop self-confidence in their abilities, understand the factors involved in skill development (training, repetition, drill) and enjoy the physical benefits of fitness. Swimming is a key component of the Harley physical education program. Students participate in a swimming unit each year. We teach all four competitive strokes, diving, flip turns, as well as water polo.

The following is a listing of other units:

Soccer	Fitness	Volleyball	Golf
Tennis	Cross Country	Badminton	Softball
Field Hockey	Cooperative Games	Basketball	Track & Field
Football	Step Aerobics	Yoga	Ultimate Frisbee
Pilates	Lawn Games	Meditation	Tae-bo
Team Handball	Harley Ball	Exercise Ball	Lacrosse
Walking	Orienteering	Relaxation	

Students in Grades 7 and 8 are encouraged to join a modified athletic team each year. Students in Grades 9 and 10 are required to join a JV or Varsity team each year. Joining more than one team sport each year and continuing participation through Grades 11 and 12 is encouraged. The athletic program is a combined effort with the Allendale Columbia School, forming "HAC Athletics," whose teams compete in the Finger Lakes Athletic Association. This league affiliation provides HAC Athletics with fair and equitable competition with schools that are comparable in enrollment size.

The HAC interscholastic athletic program offers the following modified teams for Grades 7 and 8:

Fall:

Boys' and Girls' Soccer

Boys' and Girls' Cross-country

Girls' Volleyball

Girls' Tennis

Winter:

Boys' and Girls' Basketball

Boys' and Girls' Swimming

Spring:

Boys' Baseball

Girls' Softball

Boys' and Girls' Track & Field

Boys' Tennis

For student-athletes in Grades 7 and 8 deemed "exceptional" by a coach or athletic director, the opportunity to play at the JV or Varsity level is possible, provided the following criteria are met: Middle School Head and Athletic Director approval, parent/guardian approval, and requirements for the Selection Classification Process are met.

# Flex Time

Flex Time is designed to meet the individual interests/needs of students. It takes place at the end of the school day from 2:10 - 3:00 p.m. During this time period, seventh and eighth grade students can select from various enrichment options or use the time for study hall or other independent activities. Students can choose to participate in a club, meet with teachers, work on approved projects, or sign up for a mini elective class or seminar. Flex Time opportunities change each trimester.

A few examples of Flex Time activities are:

Art	Drama	Mind/Movement
Band Open Practice	Drumming	Photography
Ceramics	Glass	Physics
Charcoal Drawing	Guitar	Private Lessons
Creative Writing	Independent Music Practice	SSP
Debate	Jazz Band	Study Hall
Design Thinking	Lego	Tutoring
Digital Art	MathCounts	Yearbook

## Study Hall

Study halls provide a quiet place for students to complete homework, read, review their notes, and study for tests. Study Hall also provides time during the school day for students to use the library or talk with his or her advisor. Time spent in study hall may be used effectively if students follow these guidelines.

- Be Prepared
- Be Quiet
- Be Respectful
- Bring outside reading