The mission of Fay School is to educate each child to his or her full potential through a broad, balanced, and challenging program that establishes a solid foundation for a productive and fulfilling life.

When we describe Fay School’s mission as educating “each child to his or her full potential through a broad, balanced, and challenging program,” that journey begins in the classroom. Our program of academics, athletics, and arts, whether in Kindergarten or grade nine, is grounded in our school philosophy. These aren’t just words on a page to us, but a statement from teachers about the living reality of what happens in school each and every day. Our philosophy comes to life as teachers and students study together and build the close relationships that are hallmarks of the Fay experience.

This course description guide provides an overview of the goals at each Primary or Lower School grade level or within each Upper School department, as well as details about the courses themselves. Curricula at the various grade levels fits within the larger frameworks of the School while recognizing that each teacher requires the flexibility to exercise his or her judgment about what will provide the best academic experience day to day, year to year. As a result, teachers don’t find themselves dusting off lesson plans or lecture notes for “November 21,” for example, but instead strive for optimal ways to challenge each child and each class. Our standards are high, and our expectations are clear for students and teachers alike: academic excellence is our shared goal.

Academic excellence looks different with five-year-olds than it does with fourteen-year-olds, but some elements are common. Curiosity and passion for learning are fundamental. You see this as Kindergarten children pose questions and then go about looking for answers that help them make sense of their world. You see it in grade five students as they discuss ideas from their math journals. And you witness it come to fruition when students in grade nine’s “Diagnosing the Modern World” present research to business people and professors. These examples speak to the internal motivation and drive of our community.

Excellence means working hard, developing a work ethic and grit. You see that when third graders give their first public speeches after many days of practice or when our oldest students muster all they have learned about writing to compete for recognition as the school’s top essayist. You see it when the bright faces of grade one children bring a play to life or when students from around the world rehearse and rehearse to produce the Upper School spring musical. Excellence is as evident in the songs of our Lower School chorus as it is the musical recitals of Upper School students from Massachusetts or Mexico, China or Maine. It’s just as clear in pop art paintings, self-portraits, or a poem recited at a morning meeting.

We teach to inspire children. They grow up quickly and take what they have learned at Fay into lives of productivity and fulfillment. While these journeys may look different for each child, establishing a solid foundation begins at Fay School.
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Please note that courses or content may change as teachers see fit over the course of the year.
As a day and boarding school for students in Kindergarten through grade nine, Fay School is a community built on five core values: Academic Excellence, Honorable Conduct, Dedicated Service, Earnest Effort, and Wellness of Mind, Body, and Spirit. While the School has grown and evolved since its founding in 1866, our central purpose has remained constant. Fay provides a broad and challenging program that empowers students to discover their talents, develop their intellectual abilities, establish essential academic skills and knowledge, and define their moral character. Earnest effort has been emphasized throughout the School’s history, as enshrined in our motto, *Poteris modo velis* (“You can if you will”).

Fay is dedicated to educating children to their full potential in the early childhood, elementary, and middle school years by helping them recognize and develop their intellectual, aesthetic, physical, social, and emotional capabilities. We teach our students essential, enduring skills: to read well, to write and speak clearly and coherently, to reason soundly, to question thoughtfully, and to study effectively. These skills support their ability to lead, to collaborate, to create, and to solve problems.

Love of learning brings us together, and we encourage our students to be curious, creative, and open to new ideas. Fay’s safe and supportive environment allows students to take risks and encourages them to learn from mistakes within the context of high expectations regarding academic performance and ethical conduct. Our teachers know their students as individuals and help them come to know themselves. As Fay students grow, they develop an understanding and acceptance of their own challenges and strengths as learners.

Honesty, respect, responsibility, empathy, and kindness inform our conduct. The development of manners, civility, and integrity are hallmarks of our school. At every grade level, we emphasize an obligation to help ensure the well being of others. As a home for boarding students from many cultures and backgrounds throughout the United States and around the world, Fay is an inclusive community that recognizes, respects, and celebrates the full range of human diversity.

In all of these ways, Fay prepares our students to lead productive and fulfilling lives that make a positive difference in the world.
Overview

The goal of the Kindergarten program is to foster children’s social and emotional growth as they learn to work in a group situation away from home. Across the curriculum, Kindergarteners work cooperatively and collaboratively to solve problems, explore, play, and learn. They build independence through self-directed work and activities. Inside and outside structured play helps them learn to navigate social relationships, explore personal interests, and develop interpersonal skills. Through a close-knit classroom community, students learn to follow agreed-upon rules as they become accustomed to the routines and procedures of the school environment. A family-style lunch also provides time for students to interact with classmates and teachers, advancing peer relationships, manners, and communication skills. Students who complete the Kindergarten program will be knowledgeable about the routines and demands of the school environment and learn to be cooperative and productive members of the greater Fay community.

Language Arts

Reading  The goal of the Kindergarten language arts program is to foster a love of reading and literacy. Reading readiness skills are supported through a variety of activities, materials, discussions, and daily routines. Students are immersed in a print-rich environment, where they have ample opportunities to practice and strengthen literacy skills through read-alouds, small group work, whole group activities, hands-on projects, play, and inquiry-based learning. Through a variety of activities, students develop sound-symbol correspondence and alphabetic principles. Phonics and phonemic awareness instruction is woven throughout the day and differentiated for each child. Students build reading comprehension and fluency skills through listening to stories, sequencing activities, working in small reading groups, and reading individualized books leveled according to their instructional needs.

Writing  Writing is also a primary focus of the Kindergarten curriculum. Students participate in a systematic approach to phonics skills, spelling, and handwriting. Students use inventive spelling while participating in writing activities, inquiry writing, personal writing, and play-based writing at dramatic play. Students who complete the Kindergarten language arts program will have a solid foundation of early literacy skills and will be prepared to continue literacy instruction in grade one.

At this level, students begin to build the independent skills necessary to study and understand new words. They use inventive spelling and practice identifying letters and their sounds, including vowels and consonants, basic suffixes, blends, and digraphs. Students learn that each word contains a vowel, and they memorize basic grade-level sight words. Inventive play helps students build the habits of mind needed to segment words into letters, segment sentences into words, use pictures to figure out words, use the first letter to guess words, stretch out words to sound them out, and “chunk” words. Regular practice reinforces these habits.

Mathematics

Mathematics in the Primary School addresses both mathematical content and processes. Children learn in a collaborative setting, using hands-on tools that help them explore key concepts. The focus is on problem solving, reasoning, making connections, and representing and communicating mathematical understanding. Children also develop their mathematical thinking in the following areas: number and operations, algebraic thinking, geometry, measurement, and data analysis.

Through whole group, small group, and individual discussions, as well as hands-on activities, the curriculum increases in complexity throughout the year. Teachers encourage students to explain their thinking and reasoning using words, numbers, and pictures.

Students who successfully complete the Kindergarten mathematics program will be able to demonstrate knowledge in the following categories:

Number and Operations
- Apply one-to-one correspondence
- Skip counting by 10s, 5s, and 2s
- Recognize, read, and form numbers
- Use manipulatives to express numbers and perform operations
- Compute simple addition and subtraction problems
- Use comparison vocabulary to compare quantities of objects

Fractions, Decimals, Percents
- Compose/decompose plane or solid figures to develop understanding of the part-whole relationship
- Compose/decompose groups of items to develop understanding of the part-whole relationship

Measurement
- Use standard and non-standard tools of measurement
- Describe and compare measurable attributes of objects

Geometry
- Identify and describe basic geometric shapes
- Model shapes by building or drawing

Data Analysis & Probability
- Collect and show information in a bar graph
- Use graphs to answer simple questions

Algebraic Thinking
- Identify, create, and extend simple patterns
- Represent addition and subtraction using pictures, words, or equations

Social Studies

In Kindergarten social studies, each child develops an understanding of himself or herself and how an individual fits into the larger community in terms of geography, history, and culture. Students explore the geography of the classroom and Fay School. Students learn that everyone has a role to play in making a group work well and that each member brings something unique to the group. Students also explore the various roles people play and aspects of diversity within the Fay School community as they learn about celebrations and traditions in other cultures.

Science

The Primary School science curriculum is inquiry-based and project-based. Its practices have been adopted from the National Research Council’s *A Framework for K-12 Science Education*. 
Primary School: Kindergarten

Practices, Crosscutting Concepts, and Core Ideas (2012). Students who demonstrate success in primary school science courses will be able to:

- Ask questions that encourage further investigation
- Record observations and ideas using pictures, numbers, and writing
- Share observations and ideas with peers
- Compare and sort objects according to similarities and differences
- Follow oral instructions for explorations
- Recognize that scientists work in groups
- Use tools appropriately to observe, draw, and describe objects

In the Kindergarten science program, children discover scientific principles through processes of inquiry, investigation, and research. Children explore weather, bees, forces, simple machines, earth and space, light, ecosystems, and plants. They also participate in other investigations throughout the year that are sparked by students’ interests.

World Languages: Spanish and French

Fay’s Primary School World Language program is based on the F.L.E.X. (Foreign Language Experience) approach. Students study both French and Spanish, each for half of the school year.

For both Spanish and French, students in Kindergarten are introduced to basic greetings and daily expressions related to the classroom. They also learn descriptive adjectives, such as color, size, and feelings. They are exposed to basic vocabulary related to numbers 1-20, days of the week, body parts, shapes, and action verbs. Games, traditional Francophone and Hispanic literature, and nursery rhymes are used to teach and reinforce the classroom material. The classroom routine includes greetings, circle time for storytelling, play and songs, and art projects. Cultural celebrations are highlighted in the Kindergarten program, and the children learn and observe important cultural celebrations, including Mexico’s Independence Day, Christmas in Latin America and Spain, Le poisson d’avril, and Mardi Gras.

Music

The music curriculum in Kindergarten is based on the philosophy of Hungarian composer Zoltán Kodály. Through singing, movement, listening, and games, children learn about the many characteristics of music. These include fast and slow sounds, long and short sounds, loud and soft sounds, and high and low sounds. This will prepare children to learn the notation for rhythm and pitch as they move into grade one. Students are exposed to simple folk songs from all over the world, as well as masterworks such as Prokofiev’s Peter and the Wolf and Vivaldi’s Four Seasons. Children make emotional connections to music and gain self-confidence by singing alone and with their classmates. It is our hope that music in Kindergarten will be a joyful experience that will set the stage for a lifetime of music appreciation.

Art

The goal of the Kindergarten art program is to nurture creative thinking, problem solving, and expression. Children learn about themselves and the world around them as they explore, observe, discuss, create, and reflect. They learn about the world of art by exploring the work of past and current artists, and they also participate in activities that help them develop and implement their ideas. Children develop fine motor skills and gain confidence in their ability to express themselves visually as they work in a range of media that includes pencils and pens, paints, paper, clay, and textiles. Children also learn safe and appropriate media process steps as they begin to develop skills in working with a variety of art materials and tools.

Library

In Kindergarten, children become familiar with the library through in-depth explorations of each of its various sections beginning with picture books and moving through poetry, folk tales, and fairy tales. Kindergarteners learn about the parts of a book, identifying the author and illustrator, and then practice locating the book in a particular section of the library. Kindergarteners also explore their personal interests, develop a sense of who they are as readers, and practice responsibility as they browse and select books to check out.

Physical Education

The physical education program in Kindergarten focuses on strengthening children’s physical fitness and health, all while continuing to develop motor skills. Classes meet four days out of a six-day rotation. Students learn about the benefits of a physically active lifestyle through activities that focus on balance, spatial awareness, motor skill development, cooperation, and sportsmanship. Students also practice basic sports skills like throwing, catching, and kicking.

Wellness

The goal of the Kindergarten wellness program is for students to learn about themselves as how they relate to others. Teachers set aside homeroom time each day to address important topics such as sharing, advocating for one’s needs, conflict resolution, and accepting others’ differences. Teachers provide students with a structured, safe, and consistent environment in which they can develop communication, self-control, and interpersonal problem-solving skills. Students begin to practice mindfulness by identifying and talking about their feelings. Students who successfully complete the Kindergarten wellness program will have practiced the following skills:

- Advocating for themselves
- Independently problem solving with peers
- Developing a vocabulary for conflict resolution
- Practicing basic social skills such as greeting one another
- Using manners and other general social courtesies

Fay School Program of Studies
Overview

The goal of grade one is to continue to foster children’s intellectual, social, and emotional growth. A major focus of the first grade curriculum is on reading and writing, and students participate in daily activities—in whole groups, in small groups, and one-on-one—to develop foundational phonetic skills and become competent readers and writers. As students become more familiar with the routines and expectations of a formal school setting, they face developmentally appropriate challenges that require them to problem solve, think critically, and work collaboratively with others. Classroom teachers encourage first graders to become more independent and self-reliant as students, and classroom activities continue to focus on building community, developing friendships, and learning how to communicate effectively with others.

Language Arts

Reading. In grade one, the goal is to foster a love of reading. Through whole group lessons and individual guided reading instruction, students explore concepts and participate in activities to help them become confident, independent readers. They learn basic phonetic rules and how to recognize and spell many high-frequency words. After each lesson, students practice new skills and review previously learned skills as they move into the individual guided reading segment of the program. Students read daily from their independent book bags, which contain literature at each child’s designated reading level. Within these levels, students choose from a wide variety of fiction, nonfiction and poetry selections. Teachers meet regularly with each student to monitor progress, focusing on fluency, applying reading strategies, comprehension, word attack skills, and vocabulary development. At the conclusion of each conference, the teacher sets a new individual goal and directs the student to complete a response sheet about one of the books. These response sheets include comprehension assignments, character studies, and chapter summaries.

Writing. The goal of the grade one writing program is to improve students’ overall communication skills. At the beginning of the year, first graders review the formation of uppercase letters and learn the lowercase letters. Next, students learn basic capitalization and punctuation rules. As these skills develop and students become more comfortable with the writing process, they practice incorporating more detail into their writing. Later in the year, students create a rubric to help them assess their work, which reminds them to check for proper capitalization and punctuation, spacing between words, correct spelling of basic sight words, and descriptive detail. With this introduction to editing, students begin to learn the importance of reviewing and revising their writing. To improve listening skills and to cultivate an appreciation of the written word, teachers read to the children daily from a range of literature, including picture books, chapter books, nonfiction, and poetry. As part of their language arts activities, first graders also present a musical play to the school. Over the course of the production, the children learn their lines, create the scenery, learn songs, and practice choreography. This is the students’ first foray into public speaking at Fay, and it is a highlight of the year.

In grade one, students continue to build on word skills and habits of mind introduced in Kindergarten. They begin the year reviewing consonant and vowel sounds and then learn phonetic concepts such as digraphs, blends, bonus letters, vowel teams, and open and closed syllables. Appropriately-leveled sight words enrich each student’s lexicon as reading skills expand. These spelling rules are explicitly taught in sequence to the whole group and then reviewed and practiced in small groups in reading and writing. Utilizing a spiraling phonics curriculum, first grade students can master, retain, and apply the skills to both their reading and writing assignments.

Mathematics

Grade one expands upon the goals and objectives of Kindergarten mathematics with a continued focus on mathematical content and processes, including basic addition and subtraction facts, and improved estimation and problem-solving skills. Through hands-on activities and work with manipulatives, students discover patterns in numbers and develop critical thinking skills. Students also develop their mathematical thinking in the following areas: number and operations, algebraic thinking, geometry, measurement, data analysis, and probability.

Students who successfully complete the grade one mathematics program will be able to fundamental understanding of topics in the following categories:

Number and Operations
  • Counting whole numbers (including skip counting)
  • Adding and subtracting whole numbers
  • Identifying and applying place value concepts
  • Applying estimation strategies
  • Understanding the relationship between number and quantity

Fractions, Decimals, Percents
  • Representing and comparing one-half and one whole through pictures

Measurement
  • Measuring using standard (cm, in) and non-standard units
  • Telling time to the hour and half hour
  • Identifying coins and their values
  • Comparing quantities of objects

Geometry
  • Identifying, analyzing, and comparing two- and three-dimensional shapes
  • Sorting and classifying shapes according to their attributes

Data Analysis & Probability
  • Collecting, analyzing, and graphing data
  • Discussing events related to likely and unlikely

Algebraic Thinking
  • Devising mental math solutions
  • Solving single- and basic multi-step problems
  • Completing, analyzing, & identifying repeating and growing patterns

Social Studies

The first grade social studies curriculum continues to focus on community, geography, history, and culture. Students continue to recognize and respect diversity within communities, build interpersonal skills, develop self awareness and responsibility, and strengthen communication skills. Focusing on the geography, history and culture of the town of Southborough, students explore how Southborough became the community it is today. Students who successfully complete the grade one social studies program will be able to:
  • Appreciate past events and historical figures of Southborough and their connection to the present day
  • Identify and use basic map features focusing on the town of Southborough
Primary School: Grade One

Science

The Primary School science curriculum is inquiry-based and project-based. Its practices have been adopted from the National Research Council's A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas (2012). Students who demonstrate success in primary school science courses will be able to:

- Ask questions that encourage further investigation
- Record observations and ideas using pictures, numbers, and writing
- Share observations and ideas with peers
- Compare and sort objects according to similarities and differences
- Follow oral instructions for explorations
- Recognize that scientists work in groups
- Use tools appropriately to observe, draw, and describe objects

In grade one, students explore how humans use their senses to make observations about the natural world. Science vocabulary focuses on using properties to group and classify elements that are familiar in children's everyday lives. Students explore weather, earth and space, light and sound, plants, and local fauna. Students begin to describe patterns in the world around them, and they explore questions about relationships among living things and the factors that influence them. Using science notebooks, students record observations, make predictions, and summarize results.

World Languages: French and Spanish

Fay's Primary School World Language program is based on F.L.E.X. (Foreign Language Experience) approach. Students study both French and Spanish, each for half of the school year.

For both French and Spanish classes, first graders review basic colors, numbers (1-20), and simple daily expressions that can be used to communicate their needs and desires in the classroom. The curriculum focuses on high-frequency and seasonal vocabulary related to topics such as the date, weather, clothes, and family. Children are exposed to vocabulary through hands-on activities, games, songs, nursery rhymes, poems, and age-appropriate literature. Authentic foreign-language children's books are used to generate discussions, reinforce vocabulary, and engage the children in learning about Francophone and Hispanic cultures. The study of culture continues to play a significant part in the curriculum, and students create projects focused on specific traditions and celebrations.

Art

The goal of the grade one art program is to develop an appreciation for visual art as a creative means of expressing knowledge and ideas. Students learn to use and maintain high quality tools and materials. There is an emphasis on craftsmanship, and students evaluate their own work through both individual and group assessments. Students are encouraged to develop unique solutions to each assignment and feel supported to develop skills at their own pace. In grade one, students are introduced to a variety of artists and artistic styles and begin to develop the vocabulary necessary to describe and interpret works of art.

Students who successfully complete the first grade art program can:

- Follow oral instructions for projects
- Use materials and tools appropriately
- Interpret project directions
- Complete class work

- Explore the use of line, shape, pattern, color and texture
- Use art terms correctly to discuss artwork or techniques

Music

The music curriculum in grade one is based on the philosophy of Hungarian composer Zoltán Kodály. Through singing, movement, listening, and games, children learn about the many characteristics of music. In grade one, students review all Kindergarten concepts. New first grade skills include reading and writing basic rhythmic notation (quarter notes, quarter rests, eighth note pairs); recognizing and notating two-beat meter (including measure, bar line, double bar line, repeat sign, and simplified time signature); and reading and writing melodic notation (solfege) for so, mi, la, and do on a five-line staff. Students are also exposed to a variety of musical styles, from folk songs to masterworks.

Library

In their library classes, first graders explore language through books, stories, poetry, and song. Lively group read-alouds bring stories to life as students experience the feeling of connectedness to a community of readers. First graders explore self-expression as they write poems and stories, and they participate in creative hands-on projects and art experiences in response to the books and ideas that they share. The library is not only a place where students discover the great ideas of others; it is also where they have time and space to create their own.

Physical Education

In physical education classes, first graders develop physical fitness and motor skills. Students have P.E. four times out of a six-day rotation. Through activities and games, students continue to develop motor skills, a sense of self in personal and general space, coordination, and cooperation with others. Teachers emphasize positive sportsmanship and leadership in all activities. Students also practice basic sports skills such as throwing and catching, and they continue to learn that physical activity is a lifelong practice that can be fun and satisfying.

Wellness

In first grade, the goal of the wellness program is for students to learn about themselves as how they relate to others. During homeroom time, students address important topics such as sharing, advocating for one's needs, conflict resolution, and accepting others' differences. Teachers provide students with a structured, safe, and consistent environment in which students can develop communication, self-control, and interpersonal problem-solving skills. Children begin to practice mindfulness by identifying and talking about their feelings, and by practicing self-calming techniques. First graders will continue to develop the following skills:

- Sharing needs and feelings with adults when necessary
- Understanding and identifying others' feelings, and responding appropriately
- Understanding the concepts of inclusion and exclusion and demonstrating a willingness to include others in activities
- Using mindfulness to recognize one's own feelings and emotions and to calm one's body and mind when upset

Fay School Program of Studies
Overview

In second grade, teachers continue to foster children's intellectual, social, and emotional growth. The academic program focuses on solidifying foundational skills while challenging children to think critically and creatively about their learning. Students continue to work in small groups and one-on-one for reading and mathematics, and they become increasingly responsible and independent as they work on individual and group assignments. As the oldest students in the Primary School, second graders begin to emerge as leaders and become more confident advocating for themselves in friendships and social situations. By the end of second grade, students are ready for the transition to third grade and the new challenges of Lower School.

Language Arts

Reading  In grade two, the goal of the language arts program is to foster a love of reading and help students develop the routines and strategies to become confident, independent readers. Second graders participate in guided reading with a teacher and incorporate the Daily Five, which includes reading to themselves, reading with a partner, listening to books, responding to reading and word work, and writing stories, poetry, plays, and oral presentations. Students practice basic reading skills, build comprehension strategies, and develop fluency through exposure to a wide range of reading materials, oral discussions, and regular, one-on-one conferences with a teacher.

Writing   In grade two, students focus on the writing process as they create their own stories, journal entries, friendly letters, poetry, and nonfiction informational writing. Students have frequent opportunities to reflect on their writing and revise their work with regular teacher conferences. Students also build vocabulary and grammar skills, focusing on sentence structure, punctuation, and parts of speech. In grade two, students continue to build on word skills and habits of mind introduced in Kindergarten and grade one. Second graders continue to review and practice phonics skills introduced in first grade and incorporate new ones such as magic e, bossy r, dipthongs, contractions, root words, suffixes, and syllable division. Sight words, leveled appropriately, enrich each student's lexicon as their reading skills expand. Although inventive spelling is still used for more complex words, students are expected to apply the phonics skills taught to their daily work and master the sight words as introduced. Exploring the structure of more complex words, students prepare themselves for the phonics work emphasized in the Lower School program.

Mathematics

In second grade, the goal of the mathematics program is for students to become increasingly fluent in operations and problem solving: they learn to make sense of problems and persevere as they apply quantitative and abstract reasoning, use modeling to solve logic problems, and defend and describe their thinking. Through discussion and hands-on activities, the spiraling curriculum increases in complexity throughout the year.

Students who successfully complete the grade two mathematics program will be able to fundamental understanding of topics in the following categories:

Number and Operations
- Adding and subtracting to 20
- Demonstrating understanding of multi-digit addition and subtraction
- Skip counting by 2s, 5s, and 10s
- Understanding the base-10 system and using multiple models to represent place value to 1000
- Comparing numbers using ‘greater than’ and ‘less than’
- Creating and solving addition and subtraction story problems
- Showing readiness for multiplication and division

Fractions, Decimals, Percents
- Beginning understanding of equal groups and fractions
- Representing and comparing 1/4, 1/2, 3/4, and whole

Measurement
- Measuring using standard (cm, in, ft) and non-standard units
- Telling and writing time to the 5 minute with digital and analog clocks
- Understanding coin values and making equivalent coin exchanges

Geometry
- Applying attribute rules to classify shapes
- Identifying and classifying 2D and 3D shapes
- Recognizing symmetry in objects shapes

Data Analysis & Probability
- Organizing, representing and analyzing data
- Discussing events related to 'likely' and 'unlikely'

Algebraic Thinking
- Completing, identifying, and analyzing repeating and growing patterns
- Devising and communicating mental math solutions

Social Studies

In grade two social studies, students learn about the world beyond Fay School and Southborough and focus on the geography, history, and culture of Massachusetts. In preparation for the transition to Lower School and the study of the United States in grade three, students review the geography of Massachusetts and examine the history and culture of indigenous peoples and present day inhabitants. Students answer the question, “What is the geography, history and culture of the state of Massachusetts, and how did it become the community it is today?”

Students who successfully complete the grade two social studies program will be able to:
- Demonstrate their understanding of community
- Identify similarities and differences among individuals and groups
- Distinguish and make connections between the past and present
- Apply basic map skills and correctly use related vocabulary
- Use research skills to gather information from nonfiction texts

Science

The Primary School science curriculum is inquiry-based and project-based. Its practices have been adopted from the National Research Council's A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas (2012). Students who demonstrate success in primary school science courses will be able to:
Primary School: Grade Two

- Ask questions that encourage further investigation
- Record observations and ideas using pictures, numbers, & writing
- Share observations and ideas with peers
- Compare and sort objects according to similarities and differences
- Follow oral instructions for explorations
- Recognize that scientists work in groups
- Use tools appropriately to observe, draw, and describe objects
- In grade two, students discuss properties of matter, bees, earth and space, ecosystems, and plants. They observe motion, explore balance, and experiment with simple machines. Building upon the skills introduced in previous years, students work independently to record, evaluate, and communicate data.

World Languages: French and Spanish

Fay's Primary School World Language program is based on F.L.E.X. (Foreign Language Experience) approach. Students study both French and Spanish, each for half of the school year.

In grade two, students continue to build upon the basic skills and knowledge acquired during their first years of language study. Students participate in considerable review, combined with more challenging, age-specific vocabulary and expressions. Specifically, second graders become familiar with the richness and diversity of the Spanish-speaking and Francophone worlds through the Fay Passport project. For each country studied, students practice vocabulary related to geographic location, modes of transport, and basic personal information. Students also learn vocabulary related to and complete projects based on the cultural traditions of the countries they study. By the end of the year, students are comfortable with a range of commonly used vocabulary and expressions, can participate in brief dialogues, and are familiar with the cultures of many Spanish-speaking and Francophone countries. By the end of second grade, students are ready to select a single world language to study throughout their Lower School years.

Art

The goal of the grade two art program is to develop an appreciation for visual art as a creative means of expressing knowledge and ideas. Students learn to use and maintain high quality tools and materials. There is an emphasis on craftsmanship, and students evaluate their own work through both individual and group assessments. Students are encouraged to develop unique solutions to each assignment and feel supported to develop skills at their own pace. In grade two, students are introduced to a variety of artists and artistic styles and begin to develop the vocabulary necessary to describe and interpret works of art. Additionally, art forms of various cultural groups are introduced as they are related to the homeroom social studies curriculum.

Students who successfully complete the second grade art program can:
- Follow oral instructions for projects
- Use materials and tools appropriately
- Interpret project directions
- Complete class work
- Explore the use of line, shape, pattern, color and texture
- Use art terms correctly to discuss artwork or techniques

Music

The music curriculum in grade two is based on the philosophy of Hungarian composer Zoltán Kodály. Grade two music students review all grade one concepts and learn new skills, including identification of steps and skips and leaps (intervals) in various patterns (including the so mi la so mi pattern); identification of half notes; identification of four-beat meter; identification of the tone re; identification of known college tones in the basic pentatonic scale; singing and speaking in canon; performing rhythmic and melodic ostinato; improvisation; identification of sixteenth notes; and learning the absolute letter names of the lines and spaces of the treble staff. Students are also exposed to a variety of musical styles from folk songs to masterworks.

Library

In their library classes, second graders explore language through books, stories, poetry, and song. Lively group read-alouds bring stories to life as students experience the feeling of connectedness to a community of readers. Second graders explore self-expression as they write poems and stories, and they participate in creative hands-on projects and art experiences in response to the books and ideas that they share. Second graders also begin to learn about the research process by accessing resources in the library. The library is not only a place where students discover the great ideas of others; it is also where they have time and space to create their own.

Physical Education

The second grade physical education program emphasizes the importance of physical activity and personal fitness. Daily lessons emphasize continuous movement and appropriate physical challenges. Second graders practice gross motor skills by throwing, catching, kicking, and dribbling (foot and hand) for control using a variety of objects, such as balls and balloons. Students practice striking using a variety of implements, such as short-handled paddles and bats. By the end of second grade, students can demonstrate the correct form for rolling and throwing a ball for distance as well as demonstrate more control using other motor skills.

Wellness

Mindfulness is the focus of wellness education in second grade. As a group, students participate in discussions about feelings, emotions, socializing, and conflict resolution. Students learn how to become more aware of their feelings, use calming activities to focus their attention, and slow their bodies down. Students who successfully complete the grade two wellness program will be able to:
- Advocate for themselves and show self control
- Identify and communicate emotions
- Begin to decipher when adult intervention is, and is not, needed in peer conflict
- Show empathy by responding compassionately to others’ struggles
- Recognize and appreciate that differences such as race, gender, ethnicity, and sexual and gender orientation make a community stronger, not more divisive
- Understand that people have differences of opinions and views on a variety of topics
- Use mindfulness to regulate emotional and physical response to environmental stimuli, both positive and negative
Overview

Students enter the Lower School in grade three, and they begin the journey of understanding who they are as learners and what it means to be a successful student at Fay. Students begin each day in homeroom groupings, which are created to support the learning and personal welfare of each child. Language arts and social studies learning takes place in homeroom classes, while students meet with specialists for mathematics, science, foreign language, music, art, physical education, and library. Students participate in a lively academic program that includes direct instruction, class discussions, investigations, and projects. Instructional routines and practices in grade three are aligned with the developmental, cognitive, and emotional strengths and needs of each particular group of third graders.

Reading

In a classroom environment rich with literary materials, grade three students participate in a wide variety of reading experiences in guided and independent settings. Students read independently each day from books at their designated reading levels, choosing from a range of genres including fiction, nonfiction, and poetry. To improve comprehension, students apply grade-level and reading-level strategies that include prediction, connection, visualization, questioning, and summarizing. Teachers conduct one-on-one conferences with students to monitor individual progress and set individual goals. Guided reading groups are conducted where students practice oral reading skills, ask and answer questions, and learn how to have a book discussion. Students read in a variety of genres and are responsible for a number of independent reading projects throughout the year, which include discussions, reading logs, journals, and small partner projects. Enrichment activities are also an integral part of the reading curriculum.

Writing

The Lower School writing program encourages students to develop an understanding of and appreciation for creative and expository writing, poetry, and drama, and to communicate effectively through written and spoken language. Students complete assignments through a multi-step process known as the writing workshop, where they develop strategies for organizing their thoughts, revising and discussing their work in student/teacher conferences, and presenting completed assignments to the class. Throughout the curriculum, process writing and grammar study are designed to be parallel and interconnected methods of ensuring mastery of skills. Focusing on ideas, organization, voice, word choice, sentence fluency, conventions, and presentation, students work through the various stages of the writing process, from writing simply to get ideas down on paper, to later and final drafts of publishable writing. From the earliest stages of writing drafts that can be read aloud, revision focused on these specific traits guides students as they work. The third grade spelling curriculum emphasizes mastery of frequently used writing words through a targeted word study program.

Third graders are introduced to public speaking as each student writes and prepares a speech that he or she presents to the Lower School community. Students carefully craft their speeches with the support of their teachers; students also explore and practice public speaking skills prior to their presentation.

Mathematics

The goal of Lower School mathematics is to encourage and support students as they develop number sense, computational fluency and efficiency, strategies for problem solving, and a beginning understanding of the connectedness of mathematical topics and procedures. The curriculum offers opportunities for self-discovery and exploration of concepts and personal strategies as well as exploring and understanding traditional algorithms. Visual models are used at every level to provide concrete examples of abstract concepts.

Grade three expands upon the goals and objectives of grade two mathematics with a continued focus on the conceptual and procedural understanding of whole number operations with a concentrated study of multiplication. The curriculum encourages students to think critically, question, and analyze, asking more than a recall of basic facts. They learn to represent and explain their thinking using pictures, numbers, and words. Students continue to develop and extend mathematical proficiency in the following areas: number and operations; fractions, decimals, and percents; measurement, geometry; data analysis and probability; and algebraic thinking.

Students who successfully complete the grade three mathematics program will be able to fundamental understanding of topics in the following categories:

Number and Operations
• Reading and writing numbers using base ten materials, number names, and expanded form
• Decomposing numbers to reason and calculate numerically
• Using and applying concrete materials to re-grouping strategies for subtraction
• Using place value concepts to perform multi-digit addition and subtraction
• Solving addition and subtraction story problems
• Connecting addition to multiplication
• Multiplying one-digit numbers
• Applying properties of operations as multiplication and division strategies (Commutative, Associative, and Distributive)

Fractions, Decimals, Percents
• Developing an understanding of fractions as numbers and quantities
• Relating visual representations of basic fractions to division (1/2, 1/3, 1/4)

Measurement
• Measuring and reporting elapsed time
• Telling and writing time to the nearest minute
• Recognizing and understanding concepts of area as related to multiplication and addition

Geometry
• Showing multiplication from a geometric perspective
• Solving real world and mathematical problems involving perimeter and area

Data Analysis & Probability
• Analyzing statistical data as represented in bar graphs, line graphs, and circle graphs
Lower School: Grade Three

Algebraic Thinking
- Identifying, writing, and repeating growth patterns on a hundreds grid
- Connecting multiplication equations to concrete objects or images
- Demonstrating understanding of patterns and multiples

Social Studies

Social studies in grade three focuses on geography. Students learn the “Five Themes” of geography: location, place, region, human-environment interaction, and movement. These themes provide a basis for understanding the world around them as students explore not only where something is but also begin to answer the questions of what, why, how, and who. Students develop their understanding of the themes with studies of maps, atlases, and informational texts, as well as through a geographic study of Massachusetts and the regions of the United States.

Students who successfully complete the grade three social studies program will be able to:
- Understand and utilize maps and globes
- Recognize the major physical features of the world, such as oceans and continents
- Read and interpret a variety of informational resources, such as charts and graphs
- Recognize and apply the Five Themes to new topics
- Begin to develop an understanding of the research process

Science

The Lower School science practices have been adopted from the National Research Council’s A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas (2012) and directly build upon skills and material covered in Primary School. Students who demonstrate success in Lower School science courses will be able to:
- Ask clarifying and extending questions
- Apply the scientific process to creative real-world projects
- Create and follow a written plan for an investigation
- Understand how to gather, organize, and explain data
- Predict the outcome of an investigation and analyze the results
- Collaborate effectively to complete investigations and solve problems
- Use evidence from real-world observations to demonstrate conceptual understanding
- Communicate concepts and observations through writing and drawing

Third graders start the year with a study of magnetism, where they experience and learn how to articulate the properties and uses of magnets. Magnetic levitation is an area of focus as the students design and test MagLev train models. During their study of ecosystems and habitats, students explore the biological interdependence and the structures of living things. Students participate in a design thinking challenge related to endangered species in which they identify the current habitat of an endangered animal, assess how its habitat might change in the future, and generate three strategies to help the species thrive again. Using systems and models, students examine our solar system and learn about each planet’s environment as compared to Earth.

Digital Literacy

The goal of the digital literacy program is to provide students with the library and technology skills they need to be successful in their current and future classes.

Students learn library and technology skills in designated digital literacy classes; these skills are also an integral part of the reading, English, science, social studies and math curricula. Students leave the Lower School having explored a variety of library resources and technologies they may use both in school and at home. Whenever students use the Internet, they learn how to be safe online and become familiar with the school’s Acceptable Use Policy.

Students have access to computers in the library and in the PC and Mac labs, as well as a mobile lab of networked, wireless laptop computers that can be wheeled into any classroom.

Resources: Lower School students use a variety of library and technology resources and tools that may vary from year to year but primarily include:
- Nonfiction books
- Reference works
- Online encyclopedias and magazine databases
- Dictionaries, almanacs, and atlases
- Word processing software
- Graphic organizing software
- Presentation software
- Web browsers
- Keyboarding software
- Email
- Lower School Links at http://library.fayschool.org

Third graders learn to use the library’s web site to locate print and online information independently as well as study the organization of the library. Third graders also build information literacy and technology skills, such as taking good notes and citing sources in their classroom projects. Students further their keyboarding skills and learn how to use the Fay network for saving, retrieving, and printing files.

Students who successfully complete the grade three digital literacy program will be able to:
- Use the library and its resources on a regular basis to find a book to read for pleasure or to search for information
- Access a variety of research sources and technology tools including books, websites, subscription databases, word processing software, presentation software and communication software
- Demonstrate the importance of citing all research sources and use information and technology ethically
World Languages: Spanish and French

Fay’s Lower School French and Spanish program is based on F.L.E.S. (Foreign Language in the Elementary School). The F.L.E.S. methodologies are based on the developmental progression of first language acquisition, which involves the active use of and exposure to the language being learned. The learning style is hands-on and activity-based with textual support. Listening and speaking skills are emphasized through interactive activities such as games, choral repetition, TPR (Total Physical Response), acting out dialogues, and music. Through the use of Francophone and Hispanic children’s literature, students develop basic reading and writing skills. The study of culture continues to be a highlight of the program, as it allows the students to learn and appreciate French and Spanish speaking communities. The students are encouraged to use French or Spanish to express basic ideas and to participate in brief conversations.

Throughout the Lower School program, students develop and expand the four language skills of reading, writing, listening, and speaking.

At the beginning of grade three, students are exposed to a thorough review of the lessons taught in prior years. New lessons address themes relating to everyday life and encourage interpersonal communication in the target language. Group activities, skits, music, and theme-based projects help students become more comfortable speaking the language and applying what they have learned. The program focuses on the development of listening and speaking skills, and by the end of the year, it is expected that students are able to communicate more comfortably in their chosen world language.

Art

In grade three, the fruits of developing eye-hand coordination begin to appear in students’ work on a more sophisticated level. Students have more control over the media and can incorporate more detail into their work. They begin to explore the art history timeline as they look at cave art, Egyptian art, Greek and Roman art, African art, and Native American art.

Students who successfully complete the third grade art program will be able to:
- Use media and tools appropriately
- Understand the role of art in history
- Respect the space of other students
- Care for their materials and maintain a clean workspace

Music

The Lower School music program is based on the educational philosophy of Zoltán Kodály and incorporates other methods, including Orff and Dalcroze. Children acquire musical skills and appreciation through singing, speaking, listening, games, movement, music reading and writing, improvisation, composition, and playing instruments. Students also perform in school concerts and plays. Students are exposed to a repertoire of music from folk songs and world music to classical music. As music is a language of emotion, the music curriculum supports Fay’s core value of Wellness of Mind, Body, and Spirit by educating the child’s emotional intelligence.

Music goals in grade three include review of all grade two concepts; identification of the absolute pitch names on the treble staff; understanding of the do pentatonic scale; understanding of movable do (do = G, F or C); understanding of sixteenth note/eighth note combinations, and identifying tones below do (the extended do pentatonic scale). Third grade students also begin to study soprano recorder.

Physical Education

The goal of grade three PE is to encourage a lifelong appreciation for physical fitness, health, and sport. Students continue the developmental sequence for movement, exploration, cooperation, cardiovascular fitness, and sportsmanship. Teachers assess each student and give an effort grade every two weeks, which is based upon each child’s daily level of effort and attentiveness.

Students change into proper physical education attire at the beginning of each class. They begin with warm-ups and stretching exercises, where they practice basic motor skills such as running, skipping, hopping, jumping, sliding, galloping, throwing, catching, striking, and kicking. Students learn about team sports, in which teamwork, cooperation, sportsmanship, and skill development are an important part of the program. Games and activities in this grade are more structured and competitive by the end of the year to prepare students for fourth grade PE. There is a strong emphasis placed on the rules, skills, strategies, and expectations of all sports.

Wellness

Learning about yourself and the ways you relate to others is the focus of Wellness education in the Lower School. In grade three, classes address a number of important topics such as advocating for one’s needs, expressing emotions appropriately, resolving conflicts, mindfulness, and accepting others’ differences. Classes are structured, safe, and consistent environments where students can develop communication skills, self control, and interpersonal problem solving skills.
Overview

In fourth grade, students continue their journey of understanding who they are as learners and what it takes to be a successful student at Fay. Students begin each day in homeroom groupings, which are created to support the learning and personal welfare of each child. Students meet with specialists for all core academic instruction, which includes language arts, mathematics, science, foreign language, music, art, physical education, and library. Students participate in a lively academic program that includes direct instruction, class discussions, investigations, and projects. Instructional routines and practices are aligned with the developmental, cognitive, and emotional strengths and needs of each particular group of fourth graders, and teachers encourage increased independence and responsibility for one’s learning as the year progresses.

Reading

In a classroom environment rich with literary materials, grade four students participate in a wide variety of reading experiences in guided and independent settings. Students read independently each day from books at their designated reading levels, choosing from a range of genres including fiction, nonfiction, and poetry. To improve comprehension, students apply grade-level and reading-level strategies that include prediction, connection, visualization, questioning, and summarizing. Teachers conduct one-on-one conferences with students to monitor individual progress and set individual goals. Guided reading groups are conducted where students practice oral reading skills, ask and answer questions, and learn how to have a book discussion.

Writing

The Lower School writing program encourages students to develop an understanding of and appreciation for creative and expository writing, poetry, and drama, and to communicate effectively through written and spoken language. Students write daily and complete assignments through a multi-step process known as the writing workshop, where they develop strategies for organizing their thoughts, revising and discussing their work in student/teacher conferences, and presenting completed assignments to the class.

Students explore and apply proper language and grammar usage with the goal of improving their own writing. Throughout the writing curriculum, process writing and grammar study are designed to be parallel and interconnected methods of ensuring mastery of skills. Using the 6+1 Traits of Writing (ideas, organization, voice, word choice, sentence fluency, conventions, and presentation), students begin working through the various stages of the writing process, from writing simply to get ideas down on paper, to later and final drafts of publishable writing. From the earliest stages of a piece of writing through work that can be read aloud, revision focused on these specific traits guides students as they work.

In grade four, students begin to work through the stages of the writing workshop at their own pace and are encouraged to edit their work more independently as they become more facile with the mechanics of writing. Students learn about paragraph formation, dialogue, and literary devices as ways to enhance their written work. The spelling curriculum advances to the next level.

A yearlong vocabulary and word study program is also an integral part of English instruction. In fourth grade, teachers create a word-rich environment by modeling an interest in words through what students see in the classroom, read in a variety of texts, hear in the classroom, and use in speaking and writing. As part of their word study, students explore derivational relationships and Greek and Latin roots, making meaningful connections between words they know and words they may not know.

Projects such as the speech presentation also provide opportunities for developing public speaking and presentation skills.

Mathematics

The goal of Lower School mathematics is to encourage and support students as they develop number sense, computational fluency and efficiency, strategies for problem solving, and a beginning understanding of the connectedness of mathematical topics and procedures. The curriculum offers opportunities for self-discovery and exploration of concepts and personal strategies as well as exploring and understanding traditional algorithms. Visual models are used at every level to provide concrete examples of abstract concepts.

Grade four expands upon the goals and objectives of third grade mathematics with a continued focus on the conceptual and procedural understanding of whole number operations with a concentrated study of multiplication and division. Fractional concepts are introduced with concrete models supported by mathematical conversations and writing. The curriculum encourages students to think critically, question, and analyze, asking more than a recall of basic facts. They learn to represent and explain their thinking using pictures, numbers, and words. Students continue to develop and extend mathematical proficiency in the following areas: number and operations; fractions, decimals, and percents; measurement, geometry; data analysis and probability; and algebraic thinking.

Students who successfully complete the grade three mathematics program will be able to fundamental understanding of topics in the following categories:

**Number and Operations**
- Recalling and applying basic addition and subtraction math facts
- Reviewing and applying multi-digit addition and subtraction with re-grouping
- Reviewing strategies for multiplication fact fluency
- Describing the relationship between multiplication and division
- Showing beginning computational fluency with double-digit multiplication
- Practicing and applying the partial-quotients division algorithm with single-digit divisors
- Identifying various meanings for multiplication and division
- Finding factor pairs of whole numbers 1-100; Determining whether a given whole number is a multiple of a given one-digit factor

**Fractions, Decimals, Percents**
- Showing how equal fractions of a whole have the same area
- Showing that equal parts of shapes are not necessarily congruent
- Describing equivalent relationships among halves, fourths, and eighths

**Geometry & Measurement**
- Measuring area and perimeter of basic quadrangles
- Describing the relationship between area and perimeter
- Describing transformations of two-dimensional shapes (rotation, reflection, sliding)
demonstrate success in Lower School science courses will be able to:

- Using tools for geometric constructions (compass and straight-edge)
- Identifying and constructing lines, segments, rays, and angles
- Classifying polygons based on their properties

### Data Analysis & Probability

- Visually representing data to use as a tool during the analysis process
- Summarizing numerical data sets in relation to their contexts
- Defining ways data can be collected
- Investigating, creating, and interpreting scatter plots

### Algebraic Thinking

- Evaluating the meaning of a number sentence to determine whether it is true or false
- Applying vocabulary and notation for open sentences (introduction of variables)
- Representing growing patterns geometrically, symbolically, and graphically
- Using the four operations with whole numbers to solve problems, symbolically and numerically representing contextual problems
- Solving multistep word problems and representing these problems using open number sentences and variables
- Generating a number or shape pattern that follows a given rule or function
- Using parentheses to evaluate expressions
- Writing simple expressions and equations that record calculations with numbers
- Evaluating and interpreting numerical expressions without calculation

### Social Studies

In grade four social studies, students continue their study of geography and the “Five Themes” (location place, region, human-environment interaction, and movement) begun in grade three. Students focus on the human aspect of geography as they learn about the relationships between where people live and how and why they live there, as well as why people move. Among the topics introduced are the Native American tribes of North America, European exploration, and immigration in America. These topics also provide a transition to the study of history in future grades.

Students who successfully complete the grade four social studies program will be able to:

- Analyze information
- Compare and contrast
- Identify and extract main ideas and supporting details from a variety of resources
- Organize information with an introduction to note taking

### Science

The Lower School science practices have been adopted from the National Research Council’s *A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas* (2012) and directly build upon skills and material covered in Primary School. Students who demonstrate success in Lower School science courses will be able to:

- Ask clarifying and extending questions
- Apply the scientific process to creative real-world projects
- Create and follow a written plan for an investigation
- Understand how to gather, organize, and explain data
- Predict the outcome of an investigation and analyze the results
- Collaborate effectively to complete investigations and solve problems
- Use evidence from real-world observations to demonstrate conceptual understanding
- Communicate concepts and observations through writing and drawing

Fourth graders begin the year with a study of the environment, with a focus on water, land, and air pollution. Students conduct in-class research on this issue, culminating with the creation of student-produced informational videos and an engineering design project in which students design, build, test, and redesign a pollution solution. In a unit on color, light, and sight, students learn about the senses of vision and hearing and how the ear, eyes, and brain work together. Finally, fourth graders explore biomes, focusing on what it is that plants need to grow. Revisiting their work from the fall, students design and create sustainable biomes that enable plants to grow in potentially adverse conditions.

### Digital Literacy

The goal of the digital literacy program is to provide students with the library and technology skills they need to be successful in their current and future classes.

Students learn library and technology skills in designated digital literacy classes; these skills are also an integral part of the reading, English, science, social studies and math curricula. Students leave the Lower School having explored a variety of library resources and technologies they may use both in school and at home. Whenever students use the Internet, they learn how to be safe online and become familiar with the school’s Acceptable Use Policy.

Students have access to computers in the library and in the PC and Mac labs, as well as a mobile lab of networked, wireless laptop computers that can be wheeled into any classroom.

#### Resources

Lower School students use a variety of library and technology resources and tools that may vary from year to year but primarily include:

- Nonfiction books
- Reference works
- Online encyclopedias and magazine databases
- Dictionaries, almanacs, and atlases
- Word processing software
- Graphic organizing software
- Presentation software
- Web browsers
- Keyboarding software
- Email
- Lower School Links at http://library.fayschool.org

Fourth graders learn how to find good information online, focusing on the differences and advantages of print sources, online sources, and subscription databases. Students participate in an online safety curriculum, and they continue to develop keyboarding skills. Fourth graders build information literacy and research skills in classroom projects.

Students who successfully complete the grade four digital literacy program will be able to:

- Use the library and its resources to find a book to read for pleasure or to search for information
- Access a variety of research sources and technology tools including books, websites, subscription databases, word processing software, presentation software, and communication software
Lower School: Grade Four

- Demonstrate the importance of citing all research sources and using information and technology ethically

World Languages: Spanish and French

Fay’s Lower School French and Spanish program is based on F.L.E.S. (Foreign Language in the Elementary School). The F.L.E.S. methodologies are based on the developmental progression of first language acquisition, which involves the active use of and exposure to the language being learned. The learning style is hands-on and activity-based with textual support. Listening and speaking skills are emphasized through interactive activities such as games, choral repetition, TPR (Total Physical Response), acting out dialogues, and music. Through the use of Francophone and Hispanic children’s literature, students develop basic reading and writing skills. The study of culture continues to be a highlight of the program, as it allows the students to learn and appreciate French and Spanish speaking communities. The students are encouraged to use French or Spanish to express basic ideas and to participate in brief conversations.

In grade four, students review the material learned in grade three and expand on basic vocabulary. Students learn simple grammatical concepts, theme-based vocabulary, and common cultural expressions through hands-on activities, games, and age-appropriate Francophone and Hispanic literature and media. Throughout the year, students participate in group activities that enable them to sharpen skills in reading, writing, listening, and speaking. The class transitions to a more expanded use of French or Spanish, thus enabling the students to enhance their listening comprehension and speaking skills. By the end of the year, students are comfortable using French or Spanish expressions and basic language in the classroom. Culture is an important part of the program, and the students learn about special Francophone and Hispanic traditions and celebrations.

Art

Students focus on techniques of illustration throughout the year. They work with pencil, pen, watercolor paints, oil pastels, dry pastels, and acrylic paint. They learn about the differences and similarities among these media. One major project is a painting on canvas from observing a still life.

Students who successfully complete the fourth grade art program will be able to:
- Use media and tools appropriately
- Listen to and understand multi-step directions
- Understand the slab method of clay construction through construction of a personal totem based on Pacific Northwest Native Americans
- Work cooperatively
- Understand the color wheel as they learn to mix paint for a still-life on canvas
- Care for their materials and maintain a clean workspace

Music

The Lower School music program is based on the educational philosophy of Zoltán Kodály and incorporates other methods, including Orff and Dalcroze. Children acquire musical skills and appreciation through singing, speaking, listening, games, movement, music reading and writing, improvisation, composition, and playing instruments. Students also perform in school concerts and plays. Students are exposed to a repertoire of music from folk songs and world music to classical music. As music is a language of emotion, the music curriculum supports Fay’s core value of Wellness of Mind, Body, and Spirit by educating the child’s emotional intelligence.

Grade four goals include review of all grade three concepts; identification and demonstration of the extended do pentatonic scale (low la, low so, high do); recognition of the do, la, and so pentatonic scales; reading whole notes and whole rests; identifying uneven rhythms (syncopation); identifying 1/2 steps; learning the solfège tone fa, identifying tetrachords and hexachords, learning about key signatures; identifying meter of 3, and singing in harmony. Fourth grade students continue their study of the soprano recorder at a more advanced level.

Physical Education

In fourth grade, the P.E. program continues to focus on cardiovascular fitness and developmentally appropriate skills and activities as well as continuing progress towards developing an awareness of and participation in team sports. Teachers address skill development, effort, participation, and sportsmanship, with a focus on how to handle competitive situations in a positive manner. As grade four students will be choosing from among a range of athletic offerings in grade five, the department introduces options to students by inviting a coach from each Upper School sport to speak to the grade four students in a guest lecture format, so students can listen to the expectations of coaches on that level and to ask questions. Students begin using lockers in Harlow Gym and are expected to change into appropriate physical education attire at the beginning of each class. They begin with warm-ups and stretching exercises.

Activities:
- Fall: Flag football, field hockey, cross country, soccer, tennis
- Winter: Basketball, floor hockey, volleyball, climbing wall
- Spring: Lacrosse, softball, baseball, track and field, and pilo polo

Other PE Activities: Tag games, capture the flag, kickball, parachute, obstacle courses, Frisbee (ultimate and golf), basic tumbling and stunts, Jump Rope for Heart, creative movement and spatial awareness activities, relay races, scooter activities, muscle conditioning (vs. weight lifting)

Wellness

Throughout the year, fourth graders participate in a Wellness class that meets one time per rotation. Students address the issues of cliques, bullying, decision making, creating an inclusive environment, nutrition, problem solving, self-advocacy, mindfulness, and cooperation. The curriculum is tailored to meet the needs of the students based upon class social dynamics, school climate, and other issues that may emerge.
Overview

In fifth grade, students continue their journey of understanding who they are as learners and what it takes to be a successful student at Fay. Fifth graders transition from the homeroom model of fourth grade to Homevisory. Homevisory combines the best elements of homeroom and an advisory program, offering a home-base for fifth and sixth graders that supports their academic and social-emotional needs. Academics are departmentalized in fifth grade, and students participate in a rich academic program that includes reading, English, mathematics, science, social studies, foreign language, music, art, and library. Instructional routines and practices are aligned with the developmental, cognitive, and emotional strengths and needs of each particular group of fifth graders, and teachers encourage increased independence and responsibility for one’s learning as the year progresses. A highlight of the year is a three-day camping trip to New Hampshire in early October that helps establish, solidify, and celebrate the class community.

Reading

Literature is a tool for understanding the world and the people in it. Exposure to a broad range of literary styles and subject matter in grade five encourages students to develop their own interests, tastes, and critical skills. Teachers select books because their content parallels material studied in other classes, because they relate to a larger theme, because they are part of an important body of literature, or because they support a community of learners. Finally, selected titles provide important connections for the reader: to himself, to peers, to other generations, to other cultures, to other periods, to other philosophies, and to other worlds.

Strengthening the sense of being a part of a community of readers is an important aspect of the reading program in grade five as students are encouraged to share their interests in books. Students read a variety of material and develop an in-depth appreciation of language and style. The course emphasizes a more complex literal and interpretive comprehension of plot, character, and theme. Students analyze reading for meaning and value, critiquing an author’s intent and synthesizing and exploring information. Students are encouraged to develop critical standards and awareness of the richness of language.

Writing

Through the Lower School writing program, students learn what it is to be a writer working within a community of writers. The fifth grade writing program is based on the Writing Workshop model. Students write during class and practice expressing their ideas in a variety of creative and expository genres. One-on-one conferences with the teacher provide students with the appropriate individualized guidance to improve their writing skills. Students use Google Docs, a platform that facilitates writing instruction through collaboration and feedback.

The fifth grade writing program builds on the objectives established in grade four. Students develop their writing skills and stamina by consistently writing for long periods of time. Students also develop their ability to read like writers. Students learn how to notice, name, and then apply the strategies that they find in presented texts. At this stage of their writing study, students have learned to use a variety of strategies to generate ideas and plan their writing independently. Students explore new literary genres by developing pieces that follow the distinct structure and purpose of each genre. Rewriting is a local concept of the fifth grade curriculum. Students learn how writers continually re-evaluate, revise, and rewrite their pieces—a process supported by the use of Google Docs.

Integrated grammar and vocabulary instruction supports the students’ development as writers. Grammar lessons are woven throughout the Writing Workshop curriculum as students directly apply new rules to enhance their writing. The objective of the grammar program is to provide students with an increasingly sophisticated understanding of language conventions to continuously hone their craft. Through instruction in Greek and Latin roots, prefixes, and suffixes, students expand their vocabulary base and are better able to infer the meaning of unknown words.

A hallmark of the Lower School writing program is the tradition of the Speech Assemblies. As in grades three and four, students develop ideas, draft, and revise their speeches in a context of structure and support. Delivering their speeches to an appreciative audience encourages students to develop confidence and comfort with public speaking. Our commitment to developing poised public speakers is a yearlong objective, as students frequently share and celebrate their writing with peers and other members of the Fay community.

Mathematics

The goal of Lower School mathematics is to encourage and support students as they develop number sense, computational fluency and efficiency, strategies for problem solving, and a beginning understanding of the connectedness of mathematical topics and procedures. The curriculum offers opportunities for self-discovery and exploration of concepts and personal strategies as well as exploring and understanding traditional algorithms. Visual models are used at every level to provide concrete examples of abstract concepts.

Grade five expands upon the goals and objectives of grade four mathematics. Students practice computational skills and application of whole number operations, and they build their conceptual understanding of fractions, decimals, and percents. Writing and proof are significant components of the fifth grade program, and students are frequently asked to clarify, justify, and support their thinking in their mathematical writing. Students continue to develop and extend mathematical proficiency in the following areas: number and operations; fractions, decimals, and percents; measurement, geometry, data analysis and probability; and algebraic thinking.

Students who successfully complete the grade three mathematics program will be able to fundamental understanding of topics in the following categories:
Lower School: Grade Five

Number and Operations
- Demonstrating fluency in basic multiplication facts
- Solving multiplication problems using the traditional multiplication algorithm
- Solving division problems with partial quotients and “traditional” long-division algorithms
- Demonstrating understanding of order of operation
- Determining factors of numbers and finding the greatest common factor of two numbers
- Generating multiples of numbers and finding the least common multiple of two numbers
- Classifying numbers as prime or composite; as even or odd; and as abundant, deficient, or perfect
- Determining factorizations including prime factorization of a whole number and using prime factorization to find common multiples and factors
- Using the number line to reason about rational number relationships
- Recognizing that a number and its opposite are equal distances from zero on a number line

Fractions, Decimals, Percents
- Understanding fractions as parts of a whole, as measures or quantities, as quotients, as ratios, as decimals, and as percents
- Determining equivalent fractions, decimals, and percents
- Comparing and ordering decimals, fractions, and percents
- Developing benchmarks for estimating with fractions, decimals, and percents

Geometry & Measurement
- Developing and applying strategies and formulas for calculating area and perimeter
- Exploring relationships between area and perimeter
- Solving problems involving area and perimeter of rectangles
- Deepening understanding of area and perimeter of rectangular and nonrectangular shapes
- Relating area and perimeter to covering a figure

Data Analysis & Probability
- Visually representing data to use as an analytical tool
- Summarizing numerical data sets in relation to their contexts
- Defining ways data can be collected
- Investigating, creating, and interpreting scatter plots

Algebraic Thinking
- Understanding equality as a relationship of equivalence between two expressions and using the relationship to find missing values

Social Studies
In fifth grade social studies, students begin their first concentrated study of American history. Students learn about the social, economic, and political development of the thirteen colonies and the causes and conflicts that lead to the American Revolution. During this study, students are introduced to historical thinking skills, such as context, perspective, and cause and effect, to deepen their understanding.

Students who successfully complete the grade five social studies program will be able to:
- Interpret, analyze, and synthesize information from both primary and secondary sources
- Recognize and apply historical thinking skills
- Organize and articulate their understanding of the topics studied both verbally and in writing

Science
The Lower School science practices have been adopted from the National Research Council’s A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas (2012) and directly build upon skills and material covered in Primary School. Students who demonstrate success in Lower School science courses will be able to:
- Ask clarifying and extending questions
- Apply the scientific process to creative real-world projects
- Create and follow a written plan for an investigation
- Understand how to gather, organize, and explain data
- Predict the outcome of an investigation and analyze the results
- Collaborate effectively to complete investigations and solve problems
- Use evidence from real-world observations to demonstrate conceptual understanding
- Communicate concepts and observations through writing and drawing

Fifth graders begin their year with a study of energy and electricity, during which they explore the properties of renewable energy and the uses and forms of energy. This focus prepares students for a design project that challenges them to use electrical circuits, computer circuit boards (Makey Makey), and programming (using Scratch, a child-friendly programming language developed by MIT) to design and create inventions that solve problems. During a unit on ocean ecosystems, students learn about ocean life, investigate how humans and the ocean are interconnected, consider how our oceans are changing, and identify the driving forces behind that change. In a related hands-on design challenge, students learn how to balance buoyancy and pressure as they design, build, test, and redesign submersibles. In their final unit of study on inertia, students apply their knowledge of Newton's Laws of Motion and the properties of air to the mechanics of air-powered vehicles, as students build balloon-powered race cars and hovercrafts.
Digital Literacy

Students learn library and technology skills in designated digital literacy classes; these skills are also an integral part of the reading, English, science, social studies and math curricula. Students leave the Lower School having explored a variety of library resources and technologies they may use both in school and at home. Whenever students use the Internet, they learn how to be safe online and become familiar with the school’s Acceptable Use Policy.

Students have access to computers in the library and in the PC and Mac labs, as well as a mobile lab of networked, wireless laptop computers that can be wheeled into any classroom.

Lower School students use a variety of library and technology resources and tools that may vary from year to year but include:
• Nonfiction books
• Reference works
• Online encyclopedias and magazine databases
• Dictionaries, almanacs, and atlases
• Word processing software
• Graphic organizing software
• Presentation software
• Web browsers and email
• Keyboarding software
• Lower School Links at http://library.fayschool.org

Students in grade five receive Fay email accounts and learn to communicate with teachers and classmates, checking and sending homework assignments through the Fay network. They learn how to evaluate online sources independently and think critically about online information. Fifth graders study copyright and how to find copyright-friendly images online to use in the Digital Storytelling Book Review project. They augment their technology skills as they are introduced to more complicated layout and design programs and more challenging classroom and research assignments.

Students who successfully complete the grade five digital literacy program will be able to:
• Use the library and its resources to find a book to read for pleasure or to search for information
• Access a variety of research sources and technology tools including books, websites, subscription databases, word processing software, presentation and communication software
• Demonstrate the importance of citing all research sources and using information and technology ethically

World Languages: Spanish and French

Fay’s Lower School French and Spanish program is based on F.L.E.S. (Foreign Language in the Elementary School). The F.L.E.S. methodologies are based on the developmental progression of first language acquisition, which involves the active use of and exposure to the language being learned. Listening and speaking skills are emphasized through interactive activities such as games, choral repetition, TPR (Total Physical Response), acting out dialogues, and music. Through the use of Francophone and Hispanic children’s literature, students develop basic reading and writing skills. The study of culture continues to be a highlight of the program, as it allows the students to learn and appreciate French and Spanish speaking communities. The students are encouraged to use French or Spanish to express basic ideas and to participate in brief conversations.

In grade five, students apply their knowledge of the language acquired in previous years to more advanced written and visual projects, skits, and class performances. While oral communication in the foreign language continues to be important, there is more emphasis on the development of basic reading and writing skills, as well as on basic grammar in preparation for a more formal study of the language in grade six. Authentic children’s literature is employed along with age- and level-appropriate music, videos, and games. Cultural proficiency and knowledge of basic historical events continue to be an important part of the curriculum and offer an opportunity for students to learn and apply new vocabulary and grammar. At this level, the class is mostly conducted in the target language, so that by the end of the year, students demonstrate an ability to read, speak, and write basic Spanish or French.

Art

Grade five students build on their existing skills. They focus on portraiture and the proportions of the figure. They draw studies of hands, feet, and shoes, and they learn simple anatomy. They work in the ceramics studio to create and glaze a hand-built vessel.

Students who complete the fifth grade art program will be able to:
• Use media and tools appropriately
• Listen to and understand multi-step directions
• Understand the basics of portraiture and drawing from life
• Understand the slab method of clay construction
• Understand the proper technique of glazing ceramics
• Care for their materials and maintain a clean workspace
Lower School: Grade Five

Music

Beginning in grade five, students elect to participate in Band, Chorus, or Beginning Strings.

**Beginning Band** is open to students in grades five and six. Students learn how to assemble, hold, play, and care for their instruments. No previous instrumental experience is necessary. During the year, students learn note reading, fingering, rhythm, articulations, intonation, dynamics, posture, and appropriate music symbols. By the end of the year, students play beginning-level music as a band. Success in this course requires practice as homework. Instrument choices include flute, clarinet, alto saxophone, trumpet, trombone, and baritone horn. Students wishing to play oboe or French horn are required to seek additional support through private lessons.

**The Lower School Chorus** is open to students in grades five and six. The chorus is a treble choir that sings pieces in unison and two parts. Students also practice music reading and listening skills through the use of movable do solfege and rhythm syllables.

**Beginning Strings** is open to students in grades five and six. Students learn how to assemble, hold, play, and care for their instruments. No previous instrumental experience is necessary. Students learn note reading, fingering, rhythm, bowing, intonation, dynamics, posture, and appropriate music. By the end of the year, students play beginning-level music as an ensemble. Success in this course requires practice as homework. Students may choose either violin or cello; students wishing to play viola are required to seek additional support through private lessons.

Drama

Students are introduced to drama through games, improvisation, and scene work, with a focus on developing the skills of imagination, collaboration, concentration, listening, and observation. Students learn about technical theater, including the parts of the stage, introductory lighting and sound, and use of the curtain. During the term, each class prepares an informal, student-led production for their peers.

Athletics

The fifth and sixth grade athletic program at Fay is designed as a bridge from the physical education curriculum taught in Kindergarten through grade four to interscholastic athletics in grade seven. The focus of this program is to introduce students to a variety of activities, provide sport specific instruction, foster appropriate levels of competition, and provide opportunities for individuals to learn about teamwork, sportsmanship, and fair play. Coaches focus on technique and skill development and, as competency increases, tactical elements and game situations.

The three primary components of the program are:

- **Instructional**: Sport-specific instruction focused on skill development, technique, knowledge and understanding of rules, team concepts, and fair play
- **Intramural**: Competition against peers to build teamwork and camaraderie within the sport setting
- **Interscholastic**: Appropriate levels of competition against peer schools to provide a fun and positive experience

**Sports options for boys:**

- **Fall**: soccer, flag football, cross country
- **Winter**: basketball, hockey, wrestling, squash, fitness and games (co-ed)
- **Spring**: baseball, lacrosse, tennis (co-ed), dance

**Sports options for girls:**

- **Fall**: soccer, field hockey, cross country
- **Winter**: basketball, hockey, wrestling, squash, fitness and games (co-ed)
- **Spring**: softball, lacrosse, tennis (co-ed), dance

Wellness

Throughout the year, students in grade five participate in a Wellness class that meets one time per rotation. Students continue to explore issues relevant to pre-adolescents such as bullying, conflict resolution, stress management, decision making, nutrition, peer pressure, respect, and honesty. They also continue to expand their repertoire of mindfulness techniques. An important component of the fifth grade curriculum is the introduction of gender-specific puberty seminars.
Overview

As our sixth graders conclude their Lower School experience and prepare for their transition to the Upper School, they continue their journey of understanding who they are as learners and what it takes to be a successful student at Fay. Sixth graders start each day with Homevisory, which combines the best elements of homeroom and an advisory program and offers a home-base for sixth graders that supports their academic and social-emotional needs. Academics are departmentalized in sixth grade, and students participate in an engaging program that includes reading, English, mathematics, science, social studies, foreign language, music, art, and library. Instructional routines and practices are aligned with the developmental, cognitive, and emotional strengths and needs of each particular group of sixth graders, and teachers encourage increased independence and responsibility for one’s learning as the year progresses. A highlight of the year is a four-day capstone camping trip, which provides closure to the Lower School experience as students look forward to entering the Upper School in the fall.

Reading

Literature is a tool for understanding the world and the people in it. Exposure to a broad range of literary styles and subject matter in grade five encourages students to develop their own interests, tastes, and critical skills. Teachers select books because their content parallels material studied in other classes, because they relate to a larger theme, because they are part of an important body of literature, or because they support a community of learners. Finally, selected titles provide important connections for the reader: to himself, to peers, to other generations, to other cultures, to other periods, to other philosophies, and to other worlds.

Strengthening the sense of being a part of a community of readers is an important aspect of the reading program in grade five as students are encouraged to share their interests in books. Students read a variety of material and develop an in-depth appreciation of language and style. The course emphasizes a more complex literal and interpretive comprehension of plot, character, and theme. Students analyze reading for meaning and value, critiquing an author’s intent and synthesizing and exploring information. Students are encouraged to develop critical standards and awareness of the richness of language.

Writing

Through the Lower School writing program, students learn what it is to be a writer working within a community of writers. The sixth grade writing program is based on the Writing Workshop model. Students write during class and learn how to express their ideas in a variety of creative and expository genres. One-on-one conferences with the teacher provide students with the appropriate individualized guidance to improve their writing skills. Students use Google Docs, a platform that facilitates writing instruction through collaboration and feedback.

The sixth grade writing program builds on the objectives established in grade five. Students explore new literary genres by developing pieces that follow the distinct structure and purpose of each genre. At this stage of the writing program, students become more proficient at revising their work independently. Facilitated by their stronger metacognitive skills, students take more of a leading role in writing conferences. A greater focus on grammar and vocabulary study supports the sixth grade writer’s readiness to experiment with varied sentence structures and use increasingly sophisticated written language.

Integrated grammar and vocabulary instruction supports the students’ development as writers. Grammar lessons are woven throughout the Writing Workshop curriculum as students directly apply new rules to enhance their writing. The objective of the grammar program is to provide students with an increasingly sophisticated understanding of language conventions to continuously hone their craft. A formal study of vocabulary is integrated, assessed, and applied in both reading and writing. Through instruction in Greek and Latin roots, prefixes, and suffixes, students expand their vocabulary base and are better able to infer the meaning of unknown words.

A hallmark of the Lower School writing program is the tradition of the Speech Assemblies. As in grades three and four, students develop ideas, draft, and revise their speeches in a context of structure and support. Delivering their speeches to an appreciative audience encourages students to develop confidence and comfort with public speaking. Our commitment to developing poised public speakers is a yearlong objective, as students frequently share and celebrate their writing with peers and other members of the Fay community.

Mathematics

The goal of Lower School mathematics is to encourage and support students as they develop number sense, computational fluency and efficiency, strategies for problem solving, and a beginning understanding of the connectedness of mathematical topics and procedures. The curriculum offers opportunities for self-discovery and exploration of concepts and personal strategies as well as exploring and understanding traditional algorithms. Visual models are used at every level to provide concrete examples of abstract concepts.

Grade six expands upon the goals and objectives of grade five mathematics. Students practice computational skills and application of whole number operations; they also build conceptual and procedural understanding and manipulation of positive and negative fractions, decimals, and percents. Students also explore two-dimensional geometric concepts and measurement. Writing is a significant component of the sixth grade program, and students are frequently challenged to clarify, justify, and support their thinking in their mathematical writing. Teachers work closely with Upper School math teachers to provide and support an instructional progression in preparation for Upper School math classes. Students continue to develop and extend mathematical proficiency in the following areas: number and operations, fractions, decimals, and percents; measurement, geometry, data analysis and probability; and algebraic thinking.
Lower School: Grade Six

Students who successfully complete the grade three mathematics program will be able to fundamental understanding of topics in the following categories:

**Number and Operations**
- Understanding the inverse relationship between multiplication and division
- Applying and extending previous understandings of arithmetic to positive and negative integers
- Developing algorithms for adding, subtracting, multiplying, and dividing positive and negative numbers
- Locating positive and negative rational numbers on a number line

**Fractions, Decimals, Percents**
- Developing algorithms for adding, subtracting, multiplying, and dividing fractions
- Developing algorithms for adding, subtracting, multiplying, and dividing decimals
- Using benchmarks and estimation strategies to estimate the result of fraction operations
- Solving problems using fraction and decimal operations

**Geometry & Measurement**
- Understanding measurement as a counting of iterated units and differentiating between types of units (ex: linear, square, and cubic units)
- Developing and applying strategies for measuring the areas of rectangles, triangles, and parallelograms
- Measuring the perimeter of two-dimensional shapes
- Developing and applying strategies for measuring the volume and surface area of rectangular prisms
- Measuring and categorizing angles using an angle ruler or protractor
- Describing the relationship between the interior and exterior angle sums of polygons
- Classifying two-dimensional shapes based on properties such as regularness, concavity, and complexity
- Classifying three-dimensional shapes as polyhedra, prisms, and pyramids

**Data Analysis & Probability**
- Visually representing data to use as a tool during the analysis process
- Summarizing numerical data sets in relation to their contexts
- Defining ways data can be collected
- Investigating, creating, and interpreting scatter plots

**Algebraic Thinking**
- Representing, analyzing, and generalizing patterns with tables, graphs, words, and, when possible, symbolic rules
- Relating and comparing different forms of representation for a relationship
- Identifying functions as linear or nonlinear and contrast their properties from tables, graphs, or equations
- Showing an initial conceptual understanding of different uses of variables

**Social Studies**
In sixth grade social studies, students continue their study of American history. The year begins with a review of the topics, themes, and concepts studied in fifth grade before the introduction of new topics such the American Revolution, the creation of the republic and the U.S Constitution, expansion, slavery and the Civil War, as well as a number of other topics and themes of the late nineteenth and twentieth centuries. Throughout the year, students continue to practice recognizing and applying the historical thinking skills of context, perspective, and cause and effect. The students culminate the year with a research project on a topic related to the period of study.

Students who successfully complete the grade six social studies program will be able to:
- Interpret, analyze, and synthesize information from both primary and secondary sources
- Recognize and apply historical thinking skills
- Organize and articulate their understanding of the topics studied both verbally and in writing

**Science**
The Lower School science practices have been adopted from the National Research Council's *A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas* (2012) and directly build upon skills and material covered in Primary School. Students who demonstrate success in Lower School science courses will be able to:
- Ask clarifying and extending questions
- Apply the scientific process to creative real-world projects
- Create and follow a written plan for an investigation
- Understand how to gather, organize, and explain data
- Predict the outcome of an investigation and analyze the results
- Collaborate effectively to complete investigations and solve problems
- Use evidence from real-world observations to demonstrate conceptual understanding
- Communicate concepts and observations through writing and drawing
In the fall, sixth graders study the solar system. They explore the inside of Earth and learn about earth systems; they also learn about why Earth is changing and what causes natural disasters. Students also “travel” to Mars, and they participate in an engineering design project in which they create a Mars Lander/Rover. The final unit of the year focuses on chemical interactions, during which students explore the resources available to humans and consider how these resources should be used.

**Digital Literacy**

Students learn library and technology skills in designated digital literacy classes; these skills are also an integral part of the reading, English, science, social studies, and math curricula. Students leave the Lower School having explored a variety of library resources and technologies they may use both in school and at home. Whenever students use the Internet, they learn how to be safe online and become familiar with the school’s Acceptable Use Policy.

Students have access to computers in the library and in the PC and Mac labs, as well as a mobile lab of networked, wireless laptop computers that can be wheeled into any classroom.

**Resources**  
Lower School students use a variety of library and technology resources and tools that include:

- Nonfiction books
- Reference works
- Online encyclopedias and magazine databases
- Dictionaries, almanacs, and atlases
- Word processing software
- Graphic organizing software
- Presentation software
- Web browsers and email
- Keyboarding software
- Lower School Links at http://library.fayschool.org

Students in grade six continue to develop strategies for finding appropriate information online and evaluate the differences and advantages of print, online, and subscription resources. Students learn how to create and store research such as outlines, notes, and sources electronically. They tackle increasingly complex research projects and learn valuable technologies for sharing their research.

Students who successfully complete the grade six digital literacy program will be able to:

- Use media and tools appropriately
- Listen to and understand multi-step directions
- Understand principles of proportion and design
- Understand African-American folk art and artists
- Understand the basic workings of Photoshop as they manipulate an image
- Care for their materials and maintain a clean workspace

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**World Languages: Spanish and French**

Fay’s Lower School French and Spanish program is based on F.L.E.S. (Foreign Language in the Elementary School). The F.L.E.S. methodologies are based on the developmental progression of first language acquisition, which involves the active use of and exposure to the language being learned. Listening and speaking skills are emphasized through interactive activities such as games, choral repetition, TPR (Total Physical Response), acting out dialogues, and music. Through the use of Francophone and Hispanic children’s literature, students develop basic reading and writing skills. The study of culture continues to be a highlight of the program, as it allows the students to learn and appreciate French and Spanish speaking communities. The students are encouraged to use French or Spanish to express basic ideas and to participate in brief conversations.

In grade six, students apply their knowledge of the language acquired in previous years to more advanced written and visual projects, skits, and class performances. While oral communication in the language continues to be important, there is continued emphasis on the development of basic reading and writing skills, as well as on grammar. Authentic children’s literature is employed along with age and level-appropriate music, videos, and games. Cultural proficiency and knowledge of basic historical events continue to be a very important part of the curriculum and are tied in closely with the relevant vocabulary and grammar. At this level, the class is mostly conducted in the language, so that by the end of the year, students demonstrate confidence in their ability to understand, read, speak, and write in Spanish or French.

**Art**

Grade six students draw and explore positive and negative space. They learn about folk art and create a painted one-stringed musical instrument as well as a ceramic face pot. They look at Japanese and Chinese brush painting and create their own work in a similar style.

Students who successfully complete the sixth grade art program will be able to:

- Use media and tools appropriately
- Listen to and understand multi-step directions
- Understand principles of proportion and design
- Understand African-American folk art and artists
- Understand the basic workings of Photoshop as they manipulate an image
- Care for their materials and maintain a clean workspace
Lower School: Grade Six

Music

In grade six, students elect to participate in Band, Chorus, or Beginning Strings.

Beginning Band is open to students in grades five and six. Students learn how to assemble, hold, play, and care for their instruments. No previous instrumental experience is necessary. During the year, students learn note reading, fingering, rhythm, articulations, intonation, dynamics, posture, and appropriate music symbols. By the end of the year, students play beginning-level music as a band. Success in this course requires practice as homework. Instrument choices include flute, clarinet, alto saxophone, trumpet, trombone, and baritone horn. Students wishing to play oboe or French horn are required to seek additional support through private lessons.

The Lower School Chorus is open to students in grades five and six. The chorus is a treble choir that sings pieces in unison and two parts. Students also practice music reading and listening skills through the use of movable do solfege and rhythm syllables.

Beginning Strings is open to students in grades five and six. Students learn how to assemble, hold, play, and care for their instruments. No previous instrumental experience is necessary. During the course of the year, students learn note reading, fingering, rhythm, bowing, intonation, dynamics, posture, and appropriate music. By the end of the year, students play beginning-level music as an ensemble. Success in this course requires practice as homework. Students may choose either violin or cello; students wishing to play viola are required to seek additional support through private lessons.

Drama

In grade six, students are introduced to drama through games, improvisation and scene work, with a focus on developing the skills of imagination, collaboration, concentration, listening, and observation. Students learn about technical theater, including the parts of the stage, introductory lighting and sound, and use of the curtain. During the term, each class prepares an informal, student-led production for their peers.

Athletics

The fifth and sixth grade athletic program at Fay is designed as a bridge from the physical education curriculum taught in Kindergarten through grade four to interscholastic athletics in grade seven. The focus of this program is to introduce students to a variety of activities, provide sport specific instruction, foster appropriate levels of competition, and provide opportunities for individuals to learn about teamwork, sportsmanship, and fair play. The program creates a fun and challenging environment where players have the opportunity to learn and grow as athletes. Coaches focus on technique and skill development and, as competency increases, tactical elements and game situations.

The three primary components of the program are:

• Instructional: Sport-specific instruction focused on skill development, technique, knowledge and understanding of rules, team concepts, and fair play
• Intramural: Competition against peers to build teamwork and camaraderie within the sport setting
• Interscholastic: Appropriate levels of competition against peer schools to provide a fun and positive experience

Sports offered to boys:
• Fall: soccer, flag football, cross country
• Winter: basketball, hockey, wrestling, squash, fitness and games (co-ed)
• Spring: baseball, lacrosse, tennis (co-ed), dance

Sports offered to girls:
• Fall: soccer, field hockey, cross country
• Winter: basketball, hockey, wrestling, squash, fitness and games (co-ed)
• Spring: softball, lacrosse, tennis (co-ed), dance

Wellness

Sixth grade Wellness classes meet once per rotation and are taught in gender-specific classrooms. As students prepare for the social dynamics of the Upper School, Wellness classes begin to delve more deeply into topics relevant to adolescence, including peer pressure, time management, sleep, stress management, physical boundaries, responsible online behavior, nutrition, getting one’s self out of uncomfortable situations, and bullying. They also continue to expand their repertoire of mindfulness techniques.
Overview
Our seventh grade includes day students from Fay’s Lower School, new day students from surrounding communities, and seventh grade boarding students from around the nation and the world. Courses in math, English, history, and science are required for all seventh graders, and differentiated instruction in small classes allows close teacher-student connections to flourish. Mathematics and world language placements ensure that students study material appropriate to their level of ability and move at a pace that allows them to build on previous knowledge. All seventh graders take art, music, and wellness. In addition, students are immersed in the Innovation Lab with the Creator’s Curriculum, a course that focuses on designing and making hands-on projects using both simple and sophisticated tools, such as 3D printers and laser cutters. Throughout seventh grade, a focus on critical thinking, introspection, and problem solving helps students establish a solid academic foundation.

English 7
Seventh grade English stresses the development of good writing with particular emphasis on the need for well-structured paragraphs and more abstract thinking and writing. Frequent composition assignments continue the emphasis on writing with precision. Students focus on identifying and understanding the elements of grammar in conjunction with their own writing. In the study of literature, students begin to identify themes and their relationship to life experiences as well as examples of figurative language. Students study vocabulary in order to develop a more sophisticated written and spoken command of English.

Students build reading comprehension and analytical skills through their reading. The year begins with an in-depth study of poetry, including poems from Czeslaw Milosz’s international anthology A Book of Luminous Things. Students also read a wide selection of novels. Examples from recent years include Iqbal by Francesco D’Adamo, Before We Were Free by Julia Alvarez, The Boy Who Harnessed the Wind by William Kamkwamba, Samurai’s Garden by Gail Tsukiyama, The Only Road by Alexandra Diaz, and Shakespeare’s A Midsummer Night’s Dream.

Students may also read a range of short stories. By focusing on plot, setting, irony, theme, and character, all students are able to take notes and produce discussion questions in unique ways. After mastering the fundamental elements of story and structure, students move on to more contemporary and diverse forms of literary expression.

Throughout the year, seventh graders review and expand their grammar skills, with a focus on using parts of speech correctly, varying sentence beginnings, formalizing language, and using proper punctuation and capitalization. Students also explore sentence structure, learning to identify sentence elements such as subjects, predicates, and direct and indirect objects.

Mathematics
Based on a student’s ability to work independently and persevere with problems, along with his or her past mathematical performance, he or she is placed into one of our Upper School math courses. We recognize that students at this age develop at different rates and appreciate that there is more than one path through the math curriculum; for that reason, we conduct careful student placement in the spring of each year to ensure that each student is appropriately challenged. Please see the Mathematics Addendum for a complete list of course descriptions.

World Cultures
In World Cultures, seventh graders explore the ideas, concepts, and influences that contribute to the development of culture, such as geography, economics, government, history, and religion. Over the course of the year, students explore different regions around the world and examine the aspects of culture in order to develop an understanding and appreciation of each region’s unique cultural identity or identities.

As students explore each region, the read and analyze information from a range of media. Using primary and secondary sources, maps, and a variety of digital resources, students work to further develop their abilities to interpret and articulate their understanding of the topics and perspectives presented. Students engage in class discussions, presentations, and debates, and they develop research and writing skills.

Life Science 7
Upper School science practices have been adopted from the National Resource Council’s A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas (2012) and directly build upon the practices from the Lower School. Students who demonstrate success in upper school science courses will be able to:

- Ask questions (for science) and define problems (for engineering)
- Construct explanations (for science) and design solutions (for engineering)
- Plan and carry out investigations
- Analyze and interpret data
- Use mathematics and computational thinking to solve problems
- Develop and use models
- Participate in evidence-based arguments
- Obtain, evaluate, and communicate information

Life Science introduces students to the basic principles of biology and health science. Students learn to classify living organisms and begin to study relationships between humans and other animals on Earth. They study cell structure and function, and they also learn the structure and function of organs and organ systems within the human body. Students learn basic genetics and explore how genetic variations of traits in a population increase a species’ probability of
Upper School: Grade Seven

survival. Students study the anatomy of the human body, and they also study the biology of the natural world with an in-depth look at our local water systems. Films, microscope slides, computer simulations, laboratory exercises, and outdoor activities complement the text and allow students to build upon the analytical skills acquired in lower grades. Throughout the year, students produce independent projects stressing vital problem solving skills they will use in future science courses.

World Languages

Upon entering the Upper School, students select a world language to study. Students choose from French, Spanish, Mandarin Chinese, and Latin. Placement in all levels is based upon the student's prior experience in the language, teacher recommendations, and a placement test. See the World Language Addendum for a complete list of course descriptions.

Music

The music faculty is committed to the concept of “learning by doing” and recognizes the value of performance in every student's experience. Each year, Upper School students choose a music course from an array of options that include choir, bells, string ensemble, band, and basic musicianship. The courses are designed to extend the theory and performance skills developed in the Lower School, but students new to Fay will also find that they can succeed in a beginning-level ensemble with little or no previous musical experience. See the Music Addendum for a complete list of music offerings.

Art 7

The seventh grade program is designed to develop students’ small motor skills, social skills, and visual literacy. Students participate in interdisciplinary and multicultural projects, learn about art history, and take advantage of resources within the school and community. Students learn about the proper care and use of materials and are encouraged to respect the work of others. Students have regular opportunities to practice and refine their drawing skills. Projects include painting, collage, sculpture, printmaking, cut paper, ceramics, and other two- and three-dimensional works. Exhibit opportunities exist in the larger community, our online gallery, and the School. Students who successfully complete the seventh grade art program will be able to use media and tools appropriately, maintain a clean and productive workspace, and demonstrate understanding of the following concepts:

- Facial proportions
- Shade and gradient with pencil
- Two-point perspective
- Cultural diversity through ceramic mask-making
- Principles of linocut

Creators Class

In seventh grade, Creators Class takes place in Fay's Innovation Lab twice per rotation. The course is designed to build each student's creative confidence and focuses on the following themes:

- Design thinking, an empathy-based problem solving mindset and process, to help students identify problems and possible solutions
- Basic electronics, to do basic programming of circuit boards
- Digital fabrication, to design and build 2D and 3D objects using the school's laser cutter, vinyl cutter, and 3D printing technologies

Our ultimate goal is to give students the ability to isolate a problem they want to solve and to spend the latter part of the year designing and building solutions.

Wellness 7

Seventh grade Wellness classes are gender-specific. Topics may include sexual development, nutrition, accepting others' differences, stereotyping, bullying prevention and response, mindfulness, conflict resolution, boundaries, cyber safety and responsible use of technology, keeping one's self safe, stress management, and tobacco and alcohol awareness. The single-gender classes provide students the opportunity to feel comfortable exploring challenging topics in a way that is most relevant to their experiences.

Athletics

The athletics program takes place every day following academic classes. All students in grades seven through nine are required to participate daily in all three terms. Students choose from an array of interscholastic sports and intramural activities (one per term). Students may try out for competitive interscholastic teams or join an intramural team or activity. However, all students are required to participate in at least one interscholastic sports team each year. See the Athletics Addendum for a complete list of athletics offerings.
Overview

Both eighth grade boarding students and day students benefit from challenging courses that enhance essential skills in reading, writing, quantitative reasoning, scientific thought, and world language. The curricula in English, history, and science are standard for all students, while courses in mathematics and world languages require placement tests. By eighth grade, students have internalized fundamental skills and habits such as organization and time management, and they are refining their thinking, speaking, reading, writing, and listening abilities throughout the year in all classes. Students are also focusing on problem solving and design in our Innovation Lab, with our Creator's Class. Courses in visual and performing arts and a developmentally appropriate wellness class round out students' schedules. The work of eighth grade allows students to demonstrate academic and personal independence as they prepare for each day. Throughout the year, life skills such as discernment, adaptability, and collaboration help students establish a solid foundation for the coming year.

English 8

Eighth grade English emphasizes an understanding of literature, grammar, writing, and vocabulary. Students read from a selection of major literary works that have included in recent years the Holocaust novel MAUS I by Art Spiegelman, American Street by Ibi Zoboi, The Alchemist by Paulo Coelho, A Doll's House by Henrik Ibsen, and Shakespeare's The Winter's Tale. Eighth graders begin their year with a study of Tonya Bolden's Pathfinders: The Journeys of 16 Extraordinary Black Souls, exploring themes of empowerment, self-advocacy, and perspective. The course includes a broad survey of international poetry from Czesław Milosz's A Book of Luminous Things.

Through discussion and reflection, students participate in a close examination of the literature and reflect on each book or play with an analytical essay. Students focus on using grammar as a tool for good writing, and they practice incorporating more complex sentence structures, including verbal phrases and subordinate clauses.

Writing assignments are frequent, and students learn to move from the free writing stage, through the process of revision, to final drafts of five-paragraph (or longer) essays. The emphasis in class discussions and in student essays is on a more abstract examination of the work rather than on plot description, and students learn to identify themes and literary devices as well as specific details in the reading. Students study vocabulary in order to develop a more sophisticated written and spoken command of the English language.

Mathematics

In seventh grade, most students are placed into either Pre-Algebra or Pre-Algebra Advanced. After Pre-Algebra, students take Algebra I Part 1, Algebra I, or Extended Topics in Algebra (ETA). Following coursework in algebra, students take Geometry or Geometry Advanced, which is then followed by Algebra II, depending on prior mathematics coursework, standardized testing, and/or teacher recommendation.

We recognize that students at this age develop at different rates and appreciate that there is more than one path through the math curriculum; for that reason, we conduct careful student placement in the spring of each year to ensure that each student is appropriately challenged. Please see the Mathematics Addendum for a complete list of course descriptions.

Ancient History

In Ancient History, eighth graders explore the development and evolution of democratic theory and institutions from their origins in Greece to their demise in the Roman Republic. Students develop an understanding of how socio-economic and political factors created change within various societies and influenced the behavior of these societies as related to the themes of imperialism, slavery, and republicanism.

In this course, students develop their historical thinking skills, learning how to use primary and expert secondary source materials. Specifically, students learn to interpret and analyze these sources using the historical thinking concepts such as significance, context, perspective, cause and effect, agency, and continuity and change. To demonstrate understanding, students engage in active daily discussion and also participate in a rigorous research and writing process that stresses critical thinking and reflection.

Physical Science 8

Upper School science practices have been adopted from the National Resource Council's A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas (2012) and directly build upon the practices from the Lower School. Students who demonstrate success in upper school science courses will be able to:

- Ask questions (for science) and define problems (for engineering)
- Construct explanations (for science) and design solutions (for engineering)
- Plan and carry out investigations
- Analyze and interpret data
- Use mathematics and computational thinking to solve problems
- Develop and use models
- Participate in evidence-based arguments
- Obtain, evaluate, and communicate information

Physical Science is a lab-based course that covers foundational content related to physics and chemistry. It includes three units: coding, motion and forces, and chemistry. Using Arduino microcontrollers, students learn how to write code to manipulate movement and data collection. They develop computational thinking skills as they design rockets to collect data over the course of simulated rocket flights to study the relationship between speed and acceleration and calculate the force of gravity. Students also have the opportunity to compete on a school robotics team. Later in the year, students learn about motion and forces, starting with motion as related to a position, building to define speed and acceleration, and ending with an examination of the force of gravity. Through focused laboratory experiments, students learn to isolate variables, work with large sets of data, graph their findings, and extract information from graphs. In the final term, students learn about the structure and properties of matter and chemical reactions. Students design investigations where they control variables to provide evidence for the law of conservation of mass and energy, while taking into account variables that affect the rates of reactions.
Upper School: Grade Eight

World Languages

Upon entering the Upper School, students select a world language to study. Students choose from French, Spanish, Mandarin Chinese, and Latin. Placement in all levels is based upon the student's prior experience in the language, teacher recommendations, and a placement test. See the World Language Addendum for a complete list of course descriptions.

Music

The music faculty is committed to the concept of “learning by doing” and recognizes the value of performance in every student's experience. Each year, Upper School students choose a music course from an array of options that include choir, bells, string ensemble, band, and basic musicianship. The courses are designed to extend the theory and performance skills developed in the Lower School, but students new to Fay will also find that they can succeed in a beginning-level ensemble with little or no previous musical experience. See the Music Addendum for a complete list of music offerings.

Art

The Upper School visual arts curriculum encourages personal expression and fosters the development of cognitive, motor, and social skills. Interdisciplinary and multicultural projects, art history, and resources within the school and community are integrated through the program.

Students learn basic art skills as well as the elements and principles of design. In all grades, students have regular opportunities to draw from life and imagination; they also work in a range of media that includes paint, collage, ceramics, cut paper, sculpture, printmaking, origami, digital media, and other two- and three-dimensional media. Eighth and ninth graders have the option to participate in art electives that allow them to focus on specific areas of interest. See the Art Addendum for a complete list of art offerings.

Creators Class

The Creators Class takes place in Fay’s Innovation Lab. The course is designed to build each student's creative confidence and focuses on the following themes:

• Design thinking, an empathy-based problem solving mindset and process, to help students identify problems and possible solutions
• Basic electronics, to do basic programming of circuit boards
• Digital fabrication, to design and build 2D and 3D objects using the school's laser cutter, vinyl cutter, and 3D printing technologies

Our ultimate goal is to give students the ability to isolate a problem they want to solve and to spend the latter part of the year designing and building solutions.

Wellness 8

Students in our co-educational eighth grade Wellness classes delve more deeply into a range of topics that includes sexual development, nutrition, accepting others' differences, stereotyping, bullying prevention and response, mindfulness, conflict resolution, boundaries, cyber safety and responsible use of technology, keeping one's self safe, stress management, and tobacco and alcohol awareness. Students also explore how outside influences such as the media affect decision making. Other topics include resisting peer pressure, dating and relationship violence, practical ways to address temptation to use substances and become involved in premature sexual experimentation, alcohol, marijuana and prescription drug misuse prevention, and the development of leadership skills. The relatively small, mixed-gender classes allow for discussion aimed to help students understand others' points of view and to prepare students for the social dynamics of high school.

Athletics

The athletics program takes place every day following academic classes. All students in grades seven through nine are required to participate daily in all three terms. Students choose from an array of interscholastic sports and intramural activities (one per term). Students may try out for competitive interscholastic teams or join an intramural team or activity. However, all students are required to participate in at least one interscholastic sports team each year. See the Athletics Addendum for a complete list of athletics offerings.
Overview

Ninth graders at Fay experience a challenging and stimulating high school-level curriculum that thoroughly prepares them for tenth grade in a secondary school. In English, students delve into classics, develop a more sophisticated style of writing, and hone their public speaking skills. Most ninth graders take biology, and multiple math courses are offered, including algebra, geometry, and pre-calculus. Students may choose to study Spanish, French, Mandarin, or Latin, and they have regular opportunities to practice language skills with Fay classmates from around the world. Two electives, Topics in Modern American History and Diagnosing The Modern World (an interdisciplinary history/science course), are extremely popular among ninth graders. Students can opt to take Advanced 3D Design or take advantage of Fay’s Innovation Lab for hands-on learning across all subjects. By virtue of their seniority in the School and intellectual maturity, ninth graders take an active role in their learning and enjoy a collegial rapport with teachers. Alumni of Fay’s Ninth Grade Program cite this unique teacher-student dynamic as a key feature of their ninth grade experience.

English 9

In ninth grade English, students focus on literature, grammar, writing, and vocabulary. They are expected to develop a more sophisticated style of writing using a variety of sentence structures and verbal phrases. Grammar is closely integrated with the writing process. Students write expository and personal essays throughout the year, and they are encouraged to go beyond the more elementary five-paragraph model of an essay.

During the course of the year, examples of texts used include poetry from Billy Collins’ anthology Poetry 180, Stephen Mitchell and Emily Wilson’s translation of The Odyssey, Shakespeare’s Macbeth, The Farming of Bones by Edwidge Danticat, The Things They Carried by Tim O’Brien, and Almost, Maine by John Cariani. Ninth graders also read Leaving Berlin by Joseph Kanon over the summer, and this book is the focus of our first discussions as well as a reference point as students study the atomic bomb in their history class. The struggles and internal conflicts of the scientists and thinkers linked to the Manhattan Project serve as an introduction to the character work and thematic study of the entire year.

By the end of ninth grade, students are expected to have a sound knowledge of figurative language, especially metaphors and similes, symbols, allusions, image patterns, and personification. Specifically, students should understand how authors use these devices to convey the deeper meaning behind the writing, as well as how they can use figurative language to enhance their own personal and analytical writing. Students are expected to know how to craft a thesis statement and support it with thorough analysis and specific textual references. Students study vocabulary and grammar in order to develop a more sophisticated written and spoken command of English.

Mathematics

We recognize that students at this age develop at different rates and appreciate that there is more than one path through the math curriculum; for that reason, we conduct careful student placement in the spring of each year to ensure that each student is appropriately challenged. Please see the Mathematics Addendum for a complete list of course descriptions.

History

Ninth graders have the option of choosing from one of the following courses:

Topics of Modern America (TMA)

In Topics of Modern America (TMA), ninth graders explore the cultural, socio-economic, political, and foreign policy development of the United States from the end of World War II through the end of the Cold War. Focusing on specific time periods 1945-1960, 1960-1975, 1973-1990, students explore the questions, events, and individuals that shaped the actions, attitudes, expectations, and ideologies of modern America. Among the topics students examine over the course of the year are the rise of the United States as a global superpower and the Cold War rivalry with the Soviet Union, the Civil Rights movement, the 1960s counterculture, and the impacts of Reaganomics and the War on Drugs in the 1980s.

In TMA, students continue to develop their critical and analytical thinking skills, using the historical concepts of significance, context, perspective, cause and effect, continuity, and agency to examine primary and secondary source material. Class discussion, writing, and projects allow students to demonstrate mastery of the content and apply their understanding skills in creative ways.

Diagnosing The Modern World (DMW)

Ninth graders in Diagnosing the Modern World (DMW), a team-taught, interdisciplinary science and history course, focus each term on a specific topic or issue of particular importance to the world today and into the future. Students examine these topics from both scientific and historical perspectives and explore the interconnectedness and complexity of the problems that confront the world. Topics are chosen with an eye on current events and typically share a common theme. In the past, the class has covered topics such as disease, energy, food, waste, water, and war. Depending upon the topic, outside experts often join the class to share expertise and guide students through projects. Field trips ensure that learning happens in an optimal setting that offers context and perspective.

As students investigate the topics in DMW, they practice the skills needed to be self-motivated and independent learners: collaboration, informed discussion and debate, and independent research. As they explore a wealth of sources and perspectives, they also develop the skills of critical thinking, creative interpretation, and media literacy.

Science 9

Upper School science practices have been adopted from the National Resource Council’s A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas (2012) and directly build upon the practices from the Lower School. Students who demonstrate success in upper school science courses will be able to:

- Ask questions and define problems
- Construct explanations and design solutions
- Plan and carry out investigations
- Analyze and interpret data
- Use mathematics and computational thinking to solve problems
- Develop and use models
- Participate in evidence-based arguments
- Observe, evaluate, and communicate information

Ninth graders may choose one of the following science courses.
Upper School: Grade Nine

**Biology 9**

Biology is a full-year, laboratory-intensive high school course based on the Next Generation Science Standards. Throughout the year, students focus on broad themes and develop deep conceptual understandings for the foundational ideas in biology, including organismal structure and function, heredity, evolution, and ecology. Through student-led research, digital texts, collaborative learning teams, and exposure to primary sources, students participate in experimental design, scientific writing, data analysis and interpretation, and research. Students develop skills to prepare for future secondary level school work, such as note taking, study strategies, and learning in a digital classroom environment.

Throughout the year, biological concepts and unifying themes come to life as pressing real-world issues are brought into the classroom, such as genetic engineering, stem cell technology, climate change, intelligent design, and science denialism. Students learn to observe the world from a scientific perspective, using scientific methodology to produce reliable data. As they study biochemistry, students learn why organismal structure and function is essential to understanding organismal survival. Cell biology introduces students to the cell as the basic unit of life, and investigations focus on how cell structure enables life processes to occur. Students also study genetics and evolutionary biology, focusing on the mechanisms of inheritance, the process of evolution, and the unity and diversity of life on Earth. Students investigate organismal diversity and how interconnected systems work together to sustain life. To finish the year, students delve into ecology, exploring organismal interactions with the physical environment around Fay.

**Diagnosing The Modern World (DMW)**

(See description on previous page.)

**World Languages**

Upon entering the Upper School, students select a world language to study. Students choose from French, Spanish, Mandarin Chinese, and Latin. Placement in all levels is based upon the student’s prior experience in the language, teacher recommendations, and a placement test. With permission of the department chair and based on the schedule, a ninth grader who has completed two years of study of a world language at the Upper School level may petition to take a second language. See the World Language Addendum for a complete list of course descriptions.

**Music**

The music faculty is committed to the concept of “learning by doing” and recognizes the value of performance in every student's experience. Each year, Upper School students choose a music course from an array of options that include choir, bells, string ensemble, band, and basic musicianship. The courses are designed to extend the theory and performance skills developed in the Lower School, but students new to Fay will also find that they can succeed in a beginning-level ensemble with little or no previous musical experience. See the Music Addendum for a complete list of music offerings.

**Art**

The Upper School visual arts curriculum encourages personal expression and fosters the development of cognitive, motor, and social skills. Interdisciplinary and multicultural projects, art history, and resources within the school and community are integrated through the program.

Students learn basic art skills as well as the elements and principles of design. In all grades, students have regular opportunities to draw from life and imagination; they also work in a range of media that includes paint, collage, ceramics, cut paper, sculpture, printmaking, origami, digital media, and other two- and three-dimensional media. Eighth and ninth graders have the option to participate in art electives that allow them to focus on specific areas of interest. See the Art Addendum for a complete list of art offerings.

**Advanced 3D Design**

An elective for ninth graders, Advanced 3D Design takes place in Fay’s Innovation Lab. This course is considered a full academic course and is graded on the same scale as the core courses of math, English, science, history, and world languages. The course is designed to build each student’s creative confidence and focuses on the following themes:

- Design thinking, an empathy-based problem solving mindset and process, to help students identify problems and possible solutions
- Basic electronics, to do basic programming of circuit boards
- Digital fabrication, to design and build 2D and 3D objects using the schools laser cutter, vinyl cutter, and 3D printers
- Recognizing the moral, cultural, and environmental issues inherent in design and technology
- Designing and making quality and sustainable products

Our goal is to give students the ability to isolate a problem and to spend the latter part of the year designing and building solutions.

**Wellness 9**

Students in co-educational ninth grade Wellness classes are treated very much as high school students. Students address a number of important topics related to the secondary school search process, drug and alcohol education (including drinking and driving, regrettable sexual acts under the influence, and the dangers of prescription misuse), the legal implications of underage sexual experimentation, understanding teen depression, and bullying of various forms. Leadership is an important component of the ninth grade Wellness experience, and students participate in a leadership development trip at the beginning of the year to set students up for success. Each student learns about his or her own specific leadership style and how this style interfaces with other leadership styles. The students also participate in a multi-class ethics unit focused on critical and individual decision-making, as opposed to blind obedience to authority or the popular crowd. Lastly, Wellness class is the place where students begin to process the many conflicting emotions associated with leaving Fay School and starting anew.

**Athletics**

The athletics program takes place every day following academic classes. All students in grades seven through nine are required to participate daily in all three terms. Students choose from an array of interscholastic sports and intramural activities (one per term). Students may try out for competitive interscholastic teams or join an intramural team or activity. However, all students are required to participate in at least one interscholastic sports team each year. See the Athletics Addendum for a complete list of athletics offerings.
About the Upper School Math Program

Based on a student’s ability to work independently and persevere with problems, along with his or her past mathematical performance, he or she is placed into one of our Upper School math courses. A major goal at this level is to help students learn to write and to interpret mathematical arguments.

Many students in grade seven study pre-algebra topics in courses designed to develop an understanding of mathematics as a system of thought.

After Pre-Algebra, students take Algebra I, Algebra I Part 1, or Extended Topics in Algebra (ETA). Following coursework in algebra, students take Geometry or Geometry Advanced, which is then followed by Algebra II, depending on prior mathematics coursework, standardized testing, and/or teacher recommendation.

Student placement is evaluated in the spring of each year, recognizing that students at this age develop at different rates and appreciating that there is more than one path through Fay’s private school math program.

Pre-Algebra

In this course, students consolidate computational skills, enhance understanding of underlying mathematical concepts, and practice working with proportion, percent, linear equations, and geometric relationships. Students gain proportional reasoning skills and become proficient with integer operations.

Pre-Algebra Advanced

This course covers a sequence of topics similar to Pre-Algebra, but it covers more complex problems, and it requires a demonstration of some independence in mathematical thinking. It is designed for students who have already mastered computational skills, who have demonstrated the ability to think more abstractly about mathematics, and who are self-motivated to work independently to solve problems.

Algebra 1

This is a complete Algebra 1 course. Topics in this class include proportional reasoning, direct and inverse variation; writing, solving, and graphing linear equations and inequalities; systems of equations; functions and their transformations; non-linear functions; and quadratic equations and solutions. A TI-84 Plus graphing calculator is required and used for investigations, data analysis, graphing functions, and verifying results. In this course, students begin to see algebra as a language to model situations and solidify their ability to manipulate symbols.

Algebra, Part 1 and Part 2

This course covers the topics of the complete Algebra 1 course over two school years. It is offered to those grade eight and nine students who benefit from a more supportive pace to learn new topics and who need more guidance in learning how to tackle each new problem. In Part 1, concepts include data exploration; proportional reasoning; direct and inverse variation; writing, solving and graphing linear equations and inequalities; and systems of linear equations. In Part 2, concepts include exponential growth and decay, rational numbers and radicals, and a full study of quadratic equations and their solutions. The textbook for this class is the same as the one used in the one-year Algebra I course.

Extended Topics in Algebra (ETA)

Extended Topics in Algebra is a course designed for students who have had some initial exposure to Algebra I and Geometry and who have demonstrated strong interest, independence, and achievement in mathematics. Students move beyond straightforward application of algorithms, focusing on solving problems in context. This course delves more deeply into algebra topics, using algebraic processes to tackle geometry topics, and it moves at a more challenging pace in order to increase connectedness of the students’ understanding of algebra. Topics covered include data analysis; linear equations and inequalities in one variable; systems of equations in two variables; polynomials; functions and their transformations; non-linear functions; quadratic and rational functions; and quadratic equations and their solutions. Geometry topics covered include parallel lines, circles, congruent triangles, right triangles and trigonometry, and quadrilaterals. Students solve problems by learning how to design and apply mathematical models. A TI 84 Plus graphing calculator, in addition to apps such as Geometer’s Sketchpad, Geogebra, and Desmos, are used to support investigations and projects.

Geometry/Geometry Advanced

Geometry is a secondary school course that deepens students’ understanding of plane and solid geometric figures while fostering their abilities to analyze, justify, and communicate information about geometric relationships and write geometric proofs. Topics include congruent and similar triangles; parallel and perpendicular lines; right triangle trigonometry; polygons; circles and solids; transformations; and constructions. Algebra topics are integrated throughout the course to provide a solid and broad foundation for advanced mathematics courses. Geometry has a balanced focus on inductive and deductive reasoning, providing students with some practice with proofs. The Geometry Advanced course is for more independent learners and is a proof-based curriculum focusing on the development of inductive reasoning. Students in both courses use technology, such as Geogebra or Geometer’s Sketchpad, to further demonstrate understanding of the geometry topics.

Algebra 2

This course is a full-year study of Advanced Algebra for students who have completed Algebra I and a formal geometry course. Evidence of readiness and approval by the chair of the Mathematics Department is required to enroll. Topics include data analysis; sequences and recursion; functions, trigonometry; matrices, exponential and logarithmic functions; and conic sections. Students will also study irrational and complex numbers, polynomial equations, analytic geometry, and statistics. A TI 84 Plus graphing calculator is required in order to fully explore functions.

Pre-Calculus

Pre-Calculus is a full-year course that prepares students for Calculus. Drawing on algebra, geometry, and arithmetic, the course synthesizes students’ prior mathematical work while introducing ideas of calculus. Topics include analysis of polynomial, rational, exponential, logarithmic, and trigonometric functions; complex numbers; mathematical induction; analytic geometry and conic sections; statistics, the normal distribution, and basic combinatorics; and area under curves. Moving at a challenging pace, the course emphasizes conceptual understanding, problem solving, and proof.
Upper School: World Languages

About World Languages at Fay

Upon entering the Upper School, students select a world language to study. Students choose from French, Spanish, Mandarin Chinese, and Latin. Placement in all levels is based upon the student’s prior experience in the language, teacher recommendations, and a placement test.

French 1A

French 1A is an introductory course that provides students with practice in the four language skills: listening, speaking, reading, and writing. Students focus on listening comprehension and the use of basic conversational patterns of French speech. They also learn elementary grammar and work with appropriate reading materials, such as poetry and supplemental readers. Hands-on projects throughout the year encourage a heightened awareness of the French-speaking world, and class work incorporates music, basic newscasts, and short films to familiarize students with the sound system of the French language. Students learn greetings, time, weather, dates, school and school vocabulary, family and home vocabulary, and food vocabulary. They also learn regular verbs in the present tense, commonly used irregular verbs, and idiomatic expressions.

French 1B

French 1B is the continuation of the French 1A program. Complex sentence patterns and wider vocabulary base broaden the four basic skills of listening, speaking, reading, and writing. Vocabulary units and communicative activities focus on shopping for clothing, restaurant, sports, leisure activities, weather, and parties and celebrations. Students continue to learn the present tense of regular and irregular verbs and study of the passé compose with avoir. Students develop cultural awareness through music, basic newscasts, short films, poetry, and thematic projects.

French 2A

French 2A is a second-year course in which students continue to develop listening comprehension, speaking, reading, and writing skills. The course integrates information about French culture through short stories and poems. Students are expected to communicate in French through sustained speech and write using compound and complex sentences in the present and past. Students expand on their knowledge of irregular verbs by adding idiomatic expressions and complete a thorough study of the passé compose, imparfaits, past tense narration, adverbs, and object pronouns. Students practice applying their knowledge of grammar and verb forms to their written expression. The course is conducted in French and designed for students who are experienced and highly motivated to enhance their language skills.

French 2B

French 2B is a continuation of French 2A in which students are immersed and expected to communicate in the language. This course moves at an accelerated pace, continuing the development of listening comprehension, speaking, reading, and writing skills. Students expand on previously learned vocabulary and apply their knowledge of grammar and verb forms to their written expression. Students complete an in-depth study of reflexive verbs in the present, past, and as infinitives, the future tense, conditional mood, pronouns y and en, order of object pronouns, and article choice. In speaking, students interact with each other in situational dialogues, using sustained speech patterns and incorporating idiomatic expressions. The course integrates cultural information about the French-speaking world through short stories, newscasts, and poems.

Spanish 1A

Spanish 1A is an introductory course that provides a foundation for the development of listening, speaking, reading, and writing. The class is conducted primarily in the target language, and students are encouraged to communicate in Spanish, thus providing ongoing practice with listening comprehension. This course covers basic vocabulary that allows students to communicate effectively by asking and answering questions, describing situations, and expressing needs. Students learn a variety of grammatical concepts so they can communicate in the present and future tenses. As the year progresses, students build upon their foundations in vocabulary and grammar to develop reading and writing skills. Students gain an appreciation of the cultural diversity within Spanish-speaking countries as they reflect on their own perspectives and experiences. Students also engage in a variety of authentic celebrations that foster an appreciation for other cultures.

Spanish 1B

Spanish 1B addresses the elements of the language covered in Spanish 1A, but in more depth, for students with a foundational background in the study of Spanish. Students learn stem-changing verbs in the present tense, informal commands, and the preterite of regular and irregular verbs. Students also learn about comparative and superlative forms of adjectives, direct and indirect object pronouns, and expanded vocabulary. Cultural awareness, with a special emphasis on South America, is developed through map study, projects, films, and selected readings. Active participation is necessary and facilitates the development of speaking, listening, reading, and writing skills.

Spanish 2A

Spanish 2A is conducted in Spanish and is open to students who have demonstrated a mastery of basic grammar, verb forms, and tenses and have shown proficiency through a placement test. Placement is determined by the World Languages Department. In addition to reinforcing and broadening listening comprehension, speaking, reading, and writing skills, the course integrates cultural and historical information about the Spanish-speaking world through short stories, newspaper articles, and poems. In this course, students explore the subtleties of language with an emphasis on the differences between the imperfect and preterite tenses, and por and para. Students are expected to communicate in Spanish through sustained speech and are required to write essays using compound and complex sentences in the imperfect, progressive, present, and preterite tenses.
Spanish 2B
Spanish 2B is a continuation of the Spanish 2A course and is open to students who have demonstrated proficiency on a placement test. Placement is determined by the World Languages Department. This course moves at an accelerated pace, continuing the development of listening comprehension, speaking, reading and writing skills. Students are expected to apply their knowledge of grammar and verb forms to their written expression. Students produce a variety of written texts including narratives and informative essays. In speaking, students interact with each other in situational dialogues, using sustained speech patterns and incorporating idiomatic expressions. In addition to reinforcing and broadening the four language skills, the course integrates cultural and historical information about the Spanish-speaking world through short stories, newspaper articles, and poems. In this course, students develop a deeper understanding of the history, literature, and traditions of the Hispanic world via selected readings from a variety of literary genres. Students are expected to communicate in Spanish through sustained speech and are expected to write essays using compound and complex sentences in the future, imperfect, imperfect progressive, present, perfect, pluperfect, and conditional mood.

Grade 9 Spanish
Grade 9 Spanish is a continuation of Spanish 2B, where students are immersed in the language at all times and expected to communicate in the language as well. Students in this course have met the expectations of the level one and two courses and are well prepared for more advanced and complex language structures. Students learn and practice new vocabulary through pictures and written responses to open-ended questions, allowing for creativity, expansion and growth. Students are exposed to a variety of cultural practices and have the opportunity to recreate them and to experience them in class. Students work on authentic projects that afford them the opportunity to step outside their comfort zones and to try something new. The four modalities are given equal emphasis, and are often brought to the classroom through newspapers, magazines, and video programs. Additionally, colloquialisms and proverbs become a part of the daily routines and communication, giving students a real-world experience. Students study various grammatical concepts and learn the present perfect, pluperfect, future perfect, conditional perfect commands, present progressive, present, and conditional perfect commands, present progressive, present subjunctive, and the present perfect.

Chinese 1
Chinese 1 is an introductory course to Mandarin Chinese language and culture for students in grades seven, eight, and nine with no prior language experience. The Discovering Chinese 1 textbook is used for this course. Chinese pronunciation is taught through Pinyin, the Chinese phonetic system. Students are introduced to the Chinese writing system by studying the origins and development of Chinese characters. Four language skills (listening, speaking, reading, and writing) are emphasized throughout this course. Topics include but are not limited to greetings, locations, numbers, family, countries and nationalities, food, school life, time, date, and days of the week. In addition, Chinese culture and traditions are integrated into this course through the study of Chinese art, history, geography, folktales, films, music, and holiday celebrations.

Chinese 2
Chinese 2 is a continuation of Chinese 1 for students in grades eight and nine using the textbook Integrated Chinese Level 1. With an increased level of complexity, spoken Mandarin and written characters are emphasized throughout the course. Topics include greetings, family, nationalities, professions, hobbies, school work, daily routines, and invitations. Essential grammar and sentence patterns are introduced to enhance the students’ writing skills. At this level, students are expected to write longer and more complex paragraphs and essays using transitional expressions. As a result, they are able to construct more complicated sentences through which they express feelings, emotions, and opinions. Chinese culture and traditions are integrated into this course through films, music, classic poems, and holiday celebrations.

Grade 9 Chinese
Grade 9 Chinese, the capstone course in Fay’s Chinese language program, is a continuation of Chinese 2: it is an advanced intermediate course of the Chinese language and culture. The textbooks are Integrated Chinese Levels 1 and 2. This rigorous and challenging course focuses on reinforcing and improving students’ proficiency levels. Different sentence patterns, more complex sentence structures, various transition words, and a larger vocabulary are introduced. Topics include expressions in the classroom and daily life, shopping, transportation, weather, and dining. Chinese culture and traditions are integrated into this course through classic poems, films, music, and holiday celebrations.

Latin 1
Latin 1 is an introductory course to the Latin language and culture. Students read and translate passages from the Cambridge Unit 1 textbook. Students study moods of the five declensions, the four conjugations of verbs in active and passive voice and in indicative and imperative moods, and other basic grammatical structures including positive, comparative, and superlative adjectives, adverbs, and pronouns. Students learn effective strategies for reading and translating Latin texts of increasing difficulty. They use proper pronunciation of Classical Latin through reciting passages, composing dictations, and singing hymns. Students become acquainted with the daily life and culture of the Ancient Romans, while recognizing and appreciating their values and social attitudes.

Latin 2
Latin 2 is an intensive course that emphasizes the reading and translation of authentic texts. Students read and translate passages from the Cambridge Unit 2 textbook and unabridged selections from Catullus’ poems. In addition to reinforcing Latin 1 material, students learn the subjunctive mood, subjunctive clauses, participles, dependent verbs, and other grammatical structures necessary for the proper translation and comprehension of their readings. Students develop a deeper understanding of Roman life through the investigation of the ancient political, social, and economic structures.
Upper School: Music Courses

About the Upper School Music Program

The music faculty is committed to the concept of “learning by doing” and recognizes the value of performance in every student's experience. Each year, Upper School students choose a music course from options that include choir, bells, string ensemble, band, and basic musicianship. The courses are designed to extend the theory and performance skills developed in the Lower School, but students new to Fay will also find that they can succeed in a beginning-level ensemble with little or no previous musical experience.

Basic Musicianship

Basic Musicianship is open to Upper School students who are new to Fay and have little or no musical experience. The course will be an introduction to the basics of music: literacy, theory, history, and the Kodaly approach to singing (solfege). Through singing, listening, playing instruments, and composing, students develop music skills that provide a solid foundation to guide them in their future musical experiences.

Intermediate Band

Intermediate Band is the next step for students who have successfully completed Beginning Band in the Lower School (or the equivalent). Students are placed in this group with the approval of the director. The band’s repertoire spans a wide range of musical styles and periods. Success in this course requires practice outside of class. Students meet twice during the six-day rotation and usually perform twice throughout the year. Special ensembles may be selected out of the larger group as performance opportunities arise.

Advanced Band

Fay’s Advanced Band is composed of students with advanced skills who have been selected by audition or recommendation. Private lessons are sometimes required. The Advanced Band plays music of a more difficult nature representing a variety of cultures and styles. Students meet twice during the six-day rotation and usually perform twice throughout the year.

Jazz Band

Fay’s Jazz Band is composed of students with advanced skills, and students are selected by audition or recommendation. Private lessons are sometimes required. The Jazz Band performs jazz, rock, and pop and has specific instrumentation (sax, trumpet, trombone, guitar, bass, drums, and piano), which limits the size of the group. Students in the Jazz Band meet during the six-day rotation and usually perform two or three times throughout the year. Members of the Jazz Band must also be in the Advanced Band (as long as their instrument is in the instrumentation of the Advanced Band).

Beginning Bells

Among private school music programs, Fay’s hand bell component is quite unique. Beginning Bells is open to students in the Upper School who have no previous bell ringing experience. The course meets twice in a six-day rotation. Students learn proper ringing technique and focus on reading rhythmic notation. Students also learn to work as a team while following the cues of a conductor. Repertoire is mainly taken from hand bell method books.

Advanced Bells (Fay Bellringers)

The director selects students in this choir from the most experienced and skilled ringers. Students practice more advanced techniques, and the repertoire is more difficult. Students in these groups are more accomplished in theory and ear training.

Fay School Chorus – Girls And Boys

Fay’s choral program is divided into several choirs by grade, gender, and ability level. Students build on skills learned in the Lower School by studying the rhythms, intervals, and scales of the year’s repertoire. Movable do solfege is also used to strengthen ear training and develop music reading skills. Each choir typically sings music representing a variety of historical periods and styles. Choirs also sing at least one piece in a foreign language each year. Performances are scheduled both on and off campus. Fay choirs regularly participate in festivals, and motivated singers are encouraged to audition for MMEA’s Central District Honors Choir.

Girls: The Girls Chorus is open to girls in grades seven through nine. Repertoire consists of pieces in unison, two, and three parts.

Boys: The Boys Chorus is open to boys in grades seven through nine. The voice parts of the chorus are divided into treble, tenor, and bass. This allows for boys to sing in the range that is most comfortable to them. As voices change, boys can change sections and continue singing without interruption.

Chamber Singers

The Fay Chamber Singers is open to boys and girls in grades eight and nine. This choir is Fay’s only auditioned choral group and is an advanced ensemble allowing singers to experience a variety of voice combinations from SATB to SSA and TTB. The Chamber Singers perform more frequently than all other choirs both on and off campus.

String Ensemble

The String Ensemble is open to students with prior experience. The instrumentation includes violin, viola, cello, and contrabass. This group performs music in a variety of styles and performs on numerous occasions throughout the year.

Chamber Ensemble (Strings)

The Chamber Ensemble is a select group of string players that meets once during the six-day rotation. The students involved determine the repertoire for the group, although a string quartet is the ideal instrumentation. They play music that is more advanced than the String Ensemble. Students in the Chamber Ensemble are also required to participate in the String Ensemble.

Studio Recording

Studio Recording is open to students in grades eight and nine who completed Basic Musicianship or have a teacher recommendation. Students in Studio Recording will use technology, recording equipment, and instruments to create and record music. Students in the course should have experience using recording software, playing an instrument, or singing. Students will learn the basics of digital music creation with the use of GarageBand, Logic Pro, Audacity, and live sound equipment. Students will also have training on live sound and lighting equipment in the theater and have firsthand experience working for events on campus.
About Visual Arts Electives for Grades Eight and Nine

Eighth and ninth graders have the option to participate in art electives that allow them to focus on specific areas of interest. See below for course descriptions.

Two-Dimensional Design I (2D1)

2D1 is a foundation course with an emphasis on drawing skills, including proportion, design and composition, and color theory. In this course, students apply abstract ideas and themes to their work. Students begin to look at art with a more focused eye towards composition, and they participate in class critiques. Projects include drawing, oil pastel, and mixed media collage. This course is required for all students in grade eight before choosing other electives. Students who successfully complete 2D1 will be able to:
• Use media and tools appropriately
• Understand proportion, value, and gradient in drawing
• Extrapolate from an existing work to create a new, abstract design
• Demonstrate interpersonal understanding as they create a self-portrait collage

Two-Dimensional Design 2 (2D2)

2D2 is an advanced course in two-dimensional design. Students further investigate drawing techniques, and projects may include drawing, printmaking, and collage. 2D2 is a two-term class offered to eighth and ninth graders after completion of the required 2D1. Students who successfully complete 2D2 will be able to:
• Use media and tools appropriately
• Understand proportion, value, and gradient in drawing

Sculpture

Sculpture is an introduction to creating art in three dimensions. Students look closely at the elements of space and form while designing work that ranges from abstract to realism. Materials may include wire, cardboard, plaster, found objects, wood, stone, mixed-media, and ceramic sculpture. Sculpture is a two-term class offered to eighth and ninth graders after completion of the required 2D1. Students who successfully complete Sculpture will be able to:
• Use media and tools appropriately
• Design, plan, and execute an enlargement sculpture
• Demonstrate movement in wire sculpture

Ceramics

This course is an introduction to the pottery studio, with an emphasis on hand building and ceramic construction. Students are challenged to think in three dimensions as they plan, draft, and build pieces that often combine function and form. Students learn techniques ranging from pinching to simple wheel throwing in an expansive, clay-only studio. In addition to construction, students explore glazes and glazing techniques from dipping to antiquing. Ceramics is a two-term class offered to eighth and ninth graders after completion of the required 2D1. Students who successfully complete Ceramics will be able to:
• Use media and tools appropriately
• Understand methods of clay construction; pinch, coil, slab, wheel
• Understand glazing techniques

Digital Photography and Media

Digital Photography and Media is a course in the basics of photography using digital cameras. Students focus on composition and techniques of image capture; topics include camera usage, file format, exposure, white balance, lighting, creativity, and image editing software. Students learn to use Adobe Photoshop Elements to manipulate, correct, and crop images; students also explore advanced Photoshop techniques such as drawing within the program, combining images, and creating images from a blank canvas. Students also learn the basics of stop-motion animation and may create a short animation. Digital Photography and Media is a two-term class offered to eighth and ninth graders after completion of the required 2D1.

Painting

This is an introduction to painting and painting techniques, building on the principles of Two-Dimensional Design 1. Working from photographs and from life, students explore composition and mix colors to accurately depict their subjects. Students work in a range of media, including watercolor and acrylics. This is a two-term class offered to eighth and ninth graders after completion of the required 2D1. Students who successfully complete Painting will be able to:
• Use media and tools appropriately
• Compose a picture
• Demonstrate understanding of color mixing
• Replicate colors they see

Printmaking

Printmaking offers students an introductory look at the diverse world of printing. Students explore a number of different printing techniques, ranging from relief and intaglio to monotyping. Students participate in exchange portfolios and are welcomed into the communal feel of printing in a working print shop. While specific printing skills are assessed, students are also asked to show competency in composition, as well as knowledge of the elements and principles of design. Printmaking is a two-term class offered to eighth and ninth graders after completion of the required 2D1. Students who successfully complete Printmaking will be able to:
• Use media and tools appropriately
• Work both additively and reductively with ink
• Create multiple matrices using different materials
• Work within a communal space and exhibit respect for other's work and ideas

Advanced Studio Art

This advanced ninth grade course is a full-year immersion in the art studio and is graded as a full academic course on par with math, English, history, science, and world languages. Students are selected for Advanced Studio Art based on portfolio review by the visual arts faculty. Students complete work in two-dimensional media, including drawing, pastels, drypoint etching, mixed media, and acrylic painting. They visit galleries and explore the work of contemporary working artists. Exhibit opportunities exist in the larger community, our online gallery, and the School. Students who successfully complete Advanced Studio Art will be able to:
• Use media and tools appropriately
• Complete a still-life drawing using principles of proportion, value, and tone
• Manipulate images with Photoshop
• Create a photorealist image using grid enlargement
• Understand the techniques of drypoint etching and create a series of prints
• Understand social issues in art through an iconic portrait
Upper School: English Language Program

Overview

Most English Language Program students will begin in grade seven or eight, with the goal of joining Fay’s mainstream classes in ninth grade as preparation for secondary school. The ELP program is composed of three courses: a reading/writing course, a history course, and a research/study skills course. ELP students take all other courses—which include math, science, art, music, and wellness—with their mainstream classmates.

Immersion and Community

Students enrolling in Fay’s English Language Program are full and integral members of the Upper School community, which is composed of 275 day and boarding students from 44 local towns, 15 American states, and 25 different countries. Students have numerous opportunities throughout the school day and on weekends to participate in engaging, immersive activities that foster friendships and new interests. Students play a team sport each season, choose music and art electives, participate in after-school activities, compete in our color team competitions, share dorm rooms, and enjoy meals and social events with students from around the world. By using English continuously in meaningful contexts, students move closer to proficiency and fluency at a faster rate.

For Strong Students Beginning English Study

Students need not be fluent or nearly-fluent English speakers to find success in Fay’s English Language Program. While prior English speaking experience is not a requirement for this program, successful applicants will be able to demonstrate a strong school record, effective study skills, earnest effort, the ability to hear and incorporate feedback, and a willingness to be a contributing part of our community.

Course 1: Literature and Composition

Students participate in literary study and analysis through individualized instruction, choice reading, and guided analysis of texts. Students move toward the organization and development of longer compositions, including five-paragraph essays based in strong thesis statements.

Course 2: American History

This course introduces students to the study of American history and offers more advanced preparation for historical study and research. A course rich in content and writing, this class provides students with the tools they will need for success in high school history courses.

Course 3: Inquiry and Critical Analysis

This highly individualized course offers a workshop environment in which students learn the vocabulary, organizational skills, and study strategies needed for success in their entire academic program.
Overview

The Learning Services Department supports children with diverse learning needs from Pre-K to grade nine. Primary, Lower, and Upper School specialists work in collaboration with classroom teachers to ensure that each child has the specific support he or she needs to establish a strong foundation of academic and life skills. Directed by a Massachusetts-licensed school psychologist, the department includes learning specialists, reading and math specialists, and a speech and language pathologist, all of whom understand children’s unique learning styles. In-school evaluations are conducted as needed in order to assess a child’s learning style and needs. Information derived from these evaluations is used to create learning profiles that are shared with classroom teachers. At each grade level, specialists provide academic support individually, within a small-group setting, or integrated into the classroom based on a child’s learning profile.

Primary School

In the Primary School, students may work with a reading specialist or speech/language pathologist. Support is provided individually, in small groups, or in the classroom. Specialists closely monitor the progress of each child, providing intervention as needed. After formal assessment, some students participate in specialized reading programs such as Wilson, RAVE-O, or Visualizing and Verbalizing. Formal speech and language evaluations may be conducted in the area of articulation and/or expressive and receptive language. Speech and language support is available during school hours.

Lower School

In the Lower School, children requiring specialized reading support have an opportunity to work with a trained reading specialist either individually or in a small group. Our reading specialist is trained in Orton-Gillingham, Wilson, RAVE-O, and Read Naturally. In addition, the learning specialist is available to work in the classroom and with small groups. Some students with diagnosed learning differences qualify for additional 1:1 academic support, which can be provided by the learning specialist for an additional school fee.

Upper School

In the Upper School, we are able to provide varied levels of support based on students’ needs. Fay’s Learning Center is a multi-sensory setting staffed by qualified learning specialists to address the needs of any students who, due to their varied learning styles, pace of learning, or educational backgrounds, may require short-term academic support to perform to their fullest potential. In place of traditional study hall periods, students may be placed in the Learning Center for additional oversight and support. Specialists share specific strategies and tools that become part of a child’s intellectual repertoire. Such support may include developing and strengthening organizational skills, teaching how to plan and complete a long-term assignment or project, or bolstering math and writing skills. The Learning Center is available to any Upper School student who is referred for support or who requests additional support.

Individualized Academic Support

Individualized Academic Support with a learning specialist is available for an additional fee to students with documented learning needs. Sessions are scheduled during the school day, and learning specialists work with the faculty to ensure they understand the learning profiles of their students with documented learning differences. These learning profiles are used to appropriately shape the learning experience to enhance each student’s strengths and provide support to help these students become confident, independent learners. Profiles are made available to parents as well as to the teachers who have the student in their class.

Learning Specialists

Learning Specialists work with the faculty to understand the learning profiles of our students with documented learning differences. These learning profiles are used to develop programs to enhance each student’s strengths and provide support in areas where it is needed in order to help these students become confident, independent learners. Profiles are available online for the teachers who have the student in their class and are made available to parents.

In addition, an evaluation of educational testing, class observations, and consultations with teachers, parents, and advisors helps the learning specialist determine the best strategies for working with a student. This may include arranging extra support when appropriate, ensuring that required accommodations are provided, or educating and supporting faculty and staff in their efforts to meet the needs of our students.
Upper School: Athletics

About the Upper School Athletics Program

The athletics program takes place every day following academic classes. All students in grades seven through nine are required to participate daily in all three terms. Students choose from an array of interscholastic sports and intramural activities (one per term). Students may try out for competitive interscholastic teams or join an intramural team or activity. However, all students are required to participate in at least one interscholastic sports team each year.

Fall Athletics

**Boys and Girls Soccer** Fay offers a competitive interscholastic program for soccer, with varsity and JV levels offered for each gender. Students are placed on a team that is appropriate for their skill level.

**Football** Fay offers a competitive interscholastic football program for boys in grades seven through nine. Only a varsity level is offered, and all students are placed on that team.

**Cross Country** Fay offers a competitive interscholastic coed cross country program in grades seven through nine. A varsity level is offered, and all students are placed on that team.

**Volleyball** Fay offers competitive interscholastic programs for volleyball, with varsity and JV levels offered. Students are placed on the team that is appropriate for their skill level.

**Field Hockey** Fay offers competitive interscholastic programs for field hockey, with varsity and JV levels offered. Students are placed on the team that is appropriate for their skill level.

**Intramural Golf** Students in the intramural golf program use a driving range facility as well as two local nine-hole courses. This is not an instructional program, so students should have some prior experience playing golf. Numbers for this program may be limited.

**Intramural Tennis** The intramural tennis program provides some basic instruction and opportunities to play both singles and doubles against individuals with a similar level of experience. Numbers for this program may be limited due to court space.

**Intramural Fitness** This program focuses on helping students increase their personal fitness levels through stretching, cardiovascular workouts, strengthening exercises, conditioning, and games such as capture the flag, Ultimate Frisbee, and soccer. This program is taught by a certified strength and conditioning coach as well as a Fay faculty member.

**Outdoor Adventure** The Outdoor Adventure program (OA) is designed as a blend of personal growth experiences, skill building, and team problem solving. The sports periods include physically demanding days as well as sessions requiring more cerebral concentration. Students participate in outdoor activities in a variety of weather conditions, including off-campus excursions and two overnight experiences. Topics include shelter building, fire construction, rock climbing, and time on the ropes course.

Winter Athletics

**Boys and Girls Basketball** Fay offers a competitive interscholastic program for basketball, with varsity and JV levels offered for each gender. Students are placed on the team that is appropriate for their skill level.

**Boys and Girls Ice Hockey** Fay offers a competitive interscholastic program for ice hockey, with a varsity team for each gender and a coed JV team. Students are placed on the team that is appropriate for their abilities.

**Wrestling** Fay offers a competitive interscholastic wrestling program for boys and girls in grades seven through nine. A varsity level is offered, and all students are placed on that team.

**Squash** Fay offers an instructional squash program that takes place at Infinitum Squash in Sudbury. This program may incorporate some interscholastic matches where appropriate. Numbers may be limited for this activity.

**Intramural Skiing and Snowboarding** Fay offers a recreational ski program at Ski Ward in Shrewsbury, MA. Students can take ski or snowboard lessons as part of the program for an additional cost. Rental equipment and lessons are also available for an additional cost.

**Intramural Fitness** This program focuses on increasing personal fitness levels through stretching, cardiovascular workouts, strengthening exercises, conditioning, and games such as capture the flag, Ultimate Frisbee, and soccer. This program will be taught by a certified strength and conditioning coach as well as a Fay faculty member. Instructional swimming will be an additional component during the winter season.

**Dance** Fay offers an instructional dance program that focuses on a variety of styles of dance. Students perform in Morning Meeting and other school venues.

**Drama** Fay offers a drama program for athletic credit that focuses on one or two short productions. Students receive instruction throughout the season and perform their work before the school as a culminating event.
Spring Athletics

Boys and Girls Lacrosse  Fay offers a competitive interscholastic program for lacrosse, with varsity and JV levels offered for each gender. Students are placed on the team that is appropriate for their skill level.

Baseball  Fay offers a competitive interscholastic program for baseball, with varsity and JV levels offered. Students are placed on the team that is appropriate for their skill level.

Softball  Fay offers a competitive interscholastic program for softball, with varsity and JV levels offered. Students are placed on the team that is appropriate for their skill level.

Track and Field  Fay offers a competitive interscholastic track and field program for boys and girls in grades seven through nine. A varsity level is offered, and all students interested will be placed on that team.

Boys and Girls Tennis  Fay offers a competitive interscholastic tennis program for boys and girls in grades seven through nine. Varsity and JV levels are offered for both boys and girls teams. This sport has limited numbers, and there may be a try-out.

Intramural Fitness  This program focuses on helping students increase their personal fitness levels through stretching, cardiovascular workouts, strengthening exercises, conditioning, and games such as capture the flag, Ultimate Frisbee, and soccer. This program will be taught by a certified strength and conditioning coach as well as a Fay faculty member.

Outdoor Adventure  The Outdoor Adventure program (OA) is designed as a blend of personal growth experiences, skill building, and team problem solving. The sports periods include physically demanding days as well as sessions requiring more cerebral concentration. Students participate in outdoor activities in a variety of weather conditions, including off-campus excursions and two overnight experiences. Topics include shelter building, fire construction, rock climbing, and time on the ropes course.