

# Nightingale 2021-2022 Curriculum Guide

UPDATED AUGUST 2021



# Nightingale inspires girls to go beyond barriers.

Our vision is for Nightingale students to be joyful learners who have the intellectual depth and the courage to be critical thinkers, compassionate citizens, and agents of their own lives; in doing so, we advance equity for the betterment of all.

To achieve this mission and vision, we will educate girls' minds and hearts by:

- Infusing their lives with meaningful relationships;
- Teaching them to value difference as a source of strength and means of growth;
- Empowering them to question the status quo with confidence, empathy, resilience, and reason.

*Adopted by the Board of Trustees on November 2, 2017*





## Goals for Students

Our academic program is a liberal arts curriculum that evolves intentionally and continually to prepare students for today's world. Students develop a strong academic foundation, a life-long love of learning, and a deep trust in themselves as students and citizens of the world.

As part of the Nightingale-Bamford community, students are expected to:

1. Commit to valuing, safeguarding, and being responsible for a school community based on inclusivity and belonging for every student.
2. Take ownership over their own work.
3. Learn to face challenges, be flexible, and overcome obstacles that come with building a strong academic foundation.
4. Discover who they are and learn to cultivate their strengths and talents.
5. Respect both the academic and personal interests of their fellow students and promote kindness.
6. Participate actively in the wider community life of the school.
7. Learn that making mistakes, asking for help when needed, and taking thoughtful risks are all fundamental parts of a valuable education, and valuing this in oneself and others.

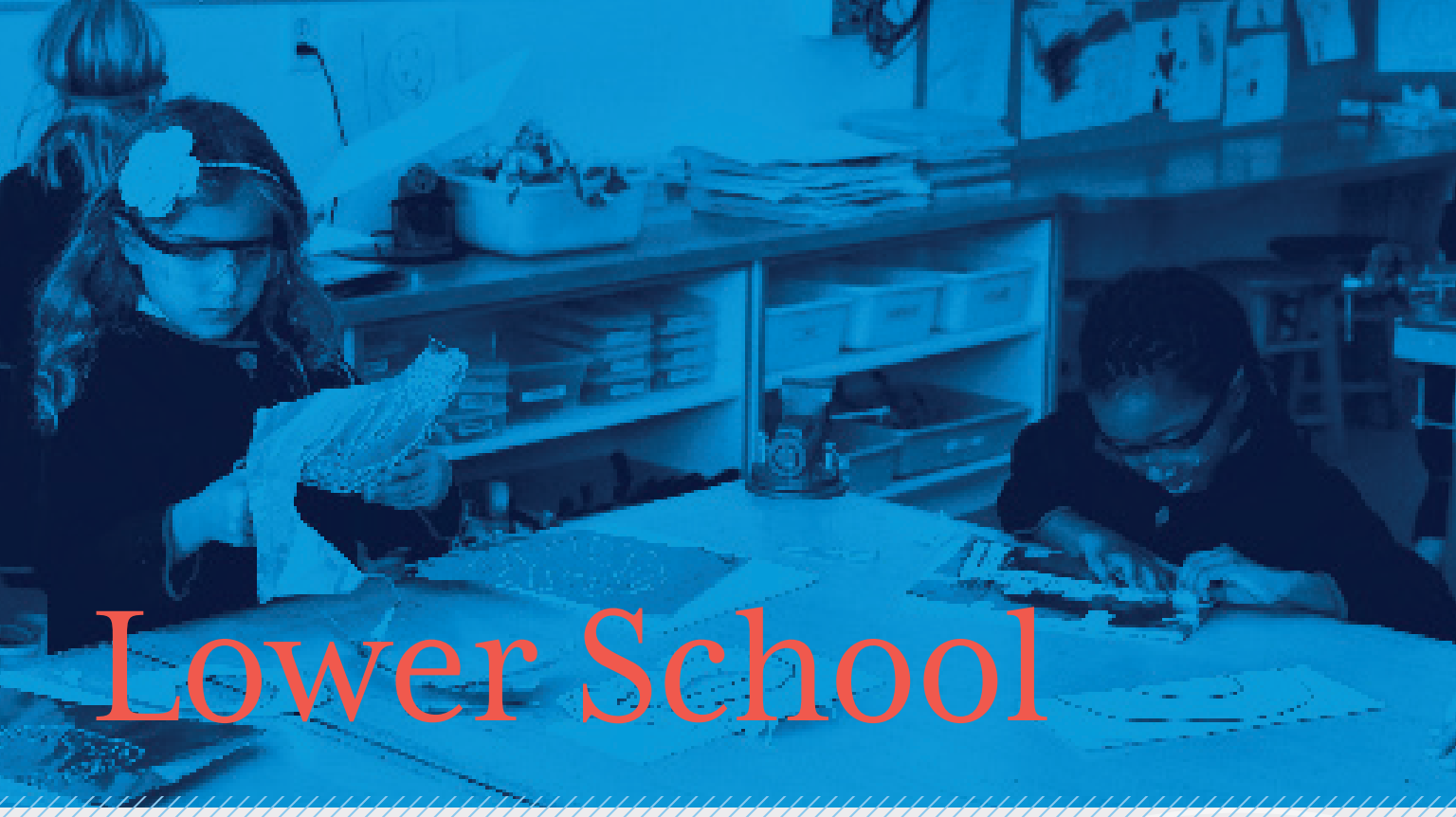


## Goals for Parents

The school expects to work in partnership with parents in support of the education of their child as she becomes increasingly confident and independent. This partnership is achieved when parents:

1. Trust the Nightingale educational philosophy and support the faculty as they set standards for both the intellectual development and the personal behavior of Nightingale students.
2. Establish schoolwork as a priority at home and provide time and space for study.
3. Stay well informed about the school program and their child's progress by reading all communications from the school and attending curriculum nights, teacher conferences, and other parent events.
4. Communicate with the school through the appropriate division head, whose role is to oversee each student's educational development.
5. Respect the school schedule by assuring their child's prompt and regular attendance.





# Lower School

The Lower School includes Kindergarten through Class IV and is committed to educating the whole child and fostering a love of learning. The Lower School program is designed to foster cognitive, social, and emotional growth, and is responsive to variations in rates of development and styles of learning, both of which influence when and how students learn. Teachers encourage creativity, independence, and self-reliance, as well as intellectual discipline and the ability to work and play effectively in a group.

The curriculum begins with concrete manipulations with steady growth towards more abstract inferential thinking as students acquire and put to use the symbols of our society. Homeroom teachers in each grade teach reading, English, mathematics, history, current events, and geography, and incorporate technology to reinforce the curriculum. Other Lower School faculty members, specialists in their fields, teach science, modern languages, music, art, library, technology, and physical education. There is a commitment to diversity, equity, and social justice work and education into all Lower School classes. Faculty members engage students in an integrated curriculum involving a number of hands-on activities. The curriculum is an instrument of growth to ensure that a child's early pleasure in exploration remains with her as she learns how to learn in an increasingly systematic way. The Lower School is committed to giving careful attention to individual student needs, emphasizing collaborative learning and interdisciplinary work.

Lower School faculty want students to learn how to think independently, to ask questions, to reason inductively and deductively, and to synthesize their learning. Teachers encourage students to take risks and to use mistakes constructively. The curriculum is designed to teach basic skills systematically; content is a vehicle to address those skills rather than an end in itself. This approach accommodates developmental differences and variations in learning styles, enabling the child to move at her own appropriate pace within the framework of class expectations.

Warmth, understanding, and respect are central to our Kindergarten program, which is based on Jean Piaget's concepts of child development. Five classroom teachers use many materials to stimulate each student's imagination, to encourage social and intellectual growth, and to foster the development of a positive self-image. While supporting each child's individual development and learning, we encourage the girls to work collaboratively and to become effective group members. The daily class meeting encourages self-expression, builds a sense of community, and fosters discussion skills. Our goal is to help each child delight in exploring reading, writing, mathematics, science, history, and geography in an academic setting. Emphasis on perseverance, concentration, independence, and evaluation of her own work helps the child to develop an effective approach to learning.

## ENGLISH AND READING

Nightingale encourages a love of reading. The English program is designed to prepare students to become fluent readers and writers, good listeners, and confident speakers. All students read a varied selection of literature including biography, history, poetry, folktales, and plays. English and reading are taught daily. The English curriculum provides regular practice in oral and written communication, including dictation, which develops phonetic decoding and auditory discrimination skills.

Each student has opportunities to perform and practice public speaking through poetry recitation and drama. Students work on creative and expository writing assignments, poetry, and journals throughout the Lower School. They are encouraged to focus on the process of writing and to revise their work. The English curriculum includes lessons in spelling, handwriting, vocabulary, grammar, and word processing. Reading is approached through phonetics and sight work using *PAF* as a base, supplemented by many other materials. Dictation is a part of each reading lesson and approaches accurate spelling through phonic patterns. Students work in small groups designed to accommodate various learning approaches and styles. Reading is part of each child's daily homework.

### KINDERGARTEN

Reading readiness is taught in small groups. Students participate in listening, writing, and oral language activities intended to help them build skills needed as developing readers and writers. Various activities are designed to reinforce the letter sounds in order to establish phonemic awareness. The students keep a journal and work on a letter paper each week to encourage their creativity and independent thought. The handwriting taught, using *PAF* motor patterns, emphasizes correct letter formation and sound-symbol relationships. Regular story time exposes the students to a rich program of literature.

### CLASS I

The reading program fosters a confident attitude towards reading and pleasure in books. Reading skills are addressed with many different approaches including phonics, dictation, and sight vocabulary. The program emphasizes comprehension and oral reading with fluency and expression. Listening skills, handwriting, vocabulary, creative expression, journal writing, and spelling are integral parts of the program.

### CLASS II

The goal in Class II is to increase and expand reading fluency with particular emphasis on non-fiction, poetry, novels, and plays. Daily dictation, incorporating punctuation, helps build a basic sense of sentence structure and provides practice in spelling rules and phonics. Vocabulary is studied in context. Creative and expository writing experiences encourage students to write freely and to develop both as readers and writers simultaneously. There are many opportunities for students to share their achievements with others. Cursive handwriting is taught using the D'Nealian method.

### CLASS III

The students focus on strengthening their oral reading and deepening their comprehension skills while continuing to develop their love of literature. They learn strategies to encode and decode multisyllabic words, recognizing rules and patterns. Using the novels read in class, they interpret the meaning of words using context clues and identify explicit and implicit ideas. The focus in English class is the solidification of basic grammatical skills in the context of longer, multi-paragraph written pieces. The students work on planning, drafting, and revising. They develop their skills by writing compositions in a variety of genres, including poetry, persuasion, correspondence, memoir, and fiction.

### CLASS IV

The reading program uses various novels to address the concepts of plot, setting, character development, figurative and symbolic language, as well as theme. Students are encouraged to infer the meaning of vocabulary and idioms from context. Expository and creative writing assignments, including poetry, are a regular part of the English program. Students learn to write and edit different kinds of paragraphs incorporating topic sentences. They also study how to plan, write, and revise a rough draft to produce a finished short essay.

## MATHEMATICS

The mathematics program develops conceptual understanding of key mathematical ideas using a rigorous and coherent model of progression from Kindergarten through Class IV. Students are encouraged to take risks and try new strategies as their understanding of mathematical relationships develops. Readily available manipulative materials broaden logical and creative thinking skills. Abstract concepts are given concrete meaning through a variety of tools. Through a blend of *Bridges in Mathematics* and *Context for Learning*, the math program allows each Lower School student to access material through various entry points. Nine periods of math per eight-day cycle provide many opportunities to explore, investigate, and solidify an understanding of numbers and operations, geometry, and measurement while continuing to provide healthy cognitive challenges through in-class discussions and collaborative group assignments.

### KINDERGARTEN

With an emphasis on process and strategy, the Kindergarten mathematics program is designed to foster logical thinking and problem-solving skills, to establish a number sense, and to instill the idea that there are many ways to solve a problem. Students study patterns, attributes, addition and subtraction, and use a variety of manipulatives to reinforce their understanding of numeration. Students develop an understanding of addition and subtraction facts to 10 and learn to count to 100 by 1s, 2s, 5s and 10s. Students create a calendar each month, reinforcing temporal concepts of past, present, and future; numeral formation; and sequence, especially with respect to the days of the week and months of the year. Tangrams, pattern blocks, and block building develop spatial awareness and elementary geometric concepts.

### CLASS I

Students continue to hone their recall of addition and subtraction facts to 10 while developing strategies to build fluency of facts to 20. Using strategies that emerge from the use of number racks, ten frames, and number lines, students become proficient in their understanding of mathematical operations and their functions. As they add and subtract two-digit quantities, their efficient use of strategies deepens their understanding of numbers to 120. In addition, place-value concepts are investigated through the use of sticks and bundles, dimes and pennies, and other manipulatives. A variety of tools and models are used to explore two- and three-dimensional shapes and fractions (halves, thirds, and fourths). Telling time to the hour and half-hour and determining elapsed time are components of measurement study.

### CLASS II

Number racks, open number lines, and base ten area pieces (hundreds, tens, and ones) further the development and mastery of addition and subtraction concepts. Addition and subtraction fact fluency to 20 is emphasized as students develop strategies for solving word problems. Place-value materials are used to model numbers to 1,000 and build an understanding of number and digit values. Flexible and efficient strategies for problem solving are derived from student- and teacher-created models as problems increase in sophistication and numeric complexity. Through creating, sharing, and solving problems, students demonstrate facility solving multi-digit problems using multi-step operations. Careful attention is given to solidifying number sense and developing a conceptual understanding of multi-digit addition and subtraction. Manipulatives, among them tiles, geoboards, and student-created materials, further an understanding of geometry and fraction concepts. Metric and customary measurement are explored through student-centered projects and activities. Routine opportunities to play games reinforce many of the skills and strategies of the math program.

### CLASS III

The Class III math program continues to solidify the basic operations of addition and subtraction while extending students' understanding of place value, multi-digit addition and subtraction, and problem solving. The standard algorithms for adding and subtracting multi-digit numbers are introduced after demonstrated mastery of these concepts. Students develop mastery of multiplication and division facts and related problem-solving strategies. Models—including equal groups, arrays, the number line, and ratio tables—complement contexts as students explore the relationship between multiplication and division. Measurement of time, mass, and volume is followed by the study of fractions and geometry.

### CLASS IV

Reasoning skills continue to develop as multi-digit multiplication and division situations are presented. Mastery of multiplication and division segues into the study of fraction and decimal equivalence and, subsequently, the addition and subtraction of fractions and decimals. Investigations provide real-life contexts through which students begin to generate strategies for problem solving. Exposure to a variety of tools—including geoboards, number lines, and base ten pieces—assist students as they model, compare, compose, and decompose fractions and decimals. A formal introduction of angles, lines, and reflective

symmetry comprise the geometry content of the math program. A variety of resources provide instances for students to describe and represent patterns and functions, prove relations, and solve for unknowns.

## SOCIAL STUDIES AND GEOGRAPHY

The social studies and geography curriculum provides an introduction to ideas and information from the social sciences. Students are encouraged to discuss current events. The youngest students gain a broader understanding of themselves in relation to their environment and the world around them, while older students explore different cultures and environments, emphasizing geography, climate, and animal and human adaptation. Basic research techniques are taught, and students work on interdisciplinary cultural projects. Museum trips supplement the program, and visits to community organizations and historic sites are an integral part of the curriculum. The program draws upon materials designed to provide experiences with authentic artifacts and activities.

### KINDERGARTEN

The focus of the curriculum is on building an awareness of the students' immediate environments, including identity, family, community, school, and traditions relating to different cultures. Topics vary from year to year according to faculty and student interests. Museum trips and visits to other New York City points of interest broaden the scope of classroom activities.

### CLASS I

Class I begins the year with a study of the classroom community. Students discuss what it means to be a good classroom citizen as they make connections and learn to respect their similarities and differences. Students then study the fundamental needs of all humanity: food, clothing, and shelter. Class I learns how environment and culture influence how people meet these basic needs. The students participate in both independent and cooperative group projects. Guest speakers and field trips supplement the curriculum.

### CLASS II

Class II studies the geography and people of New York City, focusing on how the city has changed over time. The students start with basic map reading skills, learning to locate the five boroughs, major waterways, and city landmarks. They also learn

about the city's beginnings in Mannahatta and New Amsterdam. Through a study of immigrant life in the early 1900s, students come to understand how New York City's population has grown and changed. The continuing transformation of the built environment is explored through study of subways, skyscrapers, and bridges. Each student keeps a journal of writings and drawings to document her learning. The curriculum is brought to life with frequent field trips, hands-on projects, books, photos, and online media.

### CLASS III

Through lessons and activities across the curriculum, Class III students learn to effectively, empathetically, and critically look at current events and history through multiple lenses, understanding the rights and responsibilities of people in a democratic society—whether it be the classroom or the world. Some of the themes of our study include geography, the study of population statistics, the United Nations and the rights of the child, conservation and design thinking, and global citizenship.

### CLASS IV

Class IV social studies explores United States history and geography with an emphasis on social justice movements and the power of individuals to affect positive change. Students deepen their understanding of our democratic system through an active investigation based unit of study. Through the development of their own classroom communities, students build understanding of foundations of American government, the roles of the Legislative, Executive, and Judicial branches, and the differences between state and local governments. In addition, students study the 50 states and their capitals. Students use the Super 3 research process (Plan, Do, Review) to execute an exploration of US states. The students then explore the history of social justice movements in the United States. Emphasis is placed on the Civil Rights movement, but other movements studied include Women's Rights and Suffrage, LGBTQIA+ Rights, Workers' Rights among others. As a capstone project, the students complete a biographical study of a changemaker of their choice. This research project is scaffolded to build independence and critical research skills, ending with a multimodal final project that requires students to analyze, evaluate, and create content using information gathered from print and online sources. The interdisciplinary approach includes trips, projects, novels, and discussions of current events.



## SCIENCE

The Lower School science curriculum emphasizes the scientific principles governing biology, chemistry, physics, and the earth sciences. Students work to identify structured patterns of matter, order in space, and the interactions of living things. Science is approached as both an organized body of knowledge and as a process encouraging active observation and participation. In the Lower School science laboratory, students will study a different strand of science each trimester (physical science, earth science, life science). Scientific inquiry plays a vital role in the classroom as each student will be expected to keep a science notebook which promotes formulating hypotheses, conducting and organizing research and experiments, participating in field study, and recording and comparing data. Mathematics, technology, and engineering principles are incorporated into the science curriculum each year and students will be expected to complete various in-class projects.

### KINDERGARTEN

Students study air and weather, forces and motion, and the plant kingdom. They also spend time on scientific skill building. The laboratory program focuses on experiments, demonstrations, and observations. The students work on many hands-on activities as individuals and in small groups. The science notebook is introduced at the beginning of the year.

### CLASS I

Students investigate the three phases of matter, the rock cycle, geology, and the diversity of insect life. They will begin recording observations in their science notebook through age-appropriate methods such as diagramming and illustrating. Emphasis is placed on hands-on activities and learning how to utilize scientific terminology when articulating their observations. Expectations around use of the science notebook increase as the year progresses.

### CLASS II

Students review the water cycle and investigate properties of water and hydrology concepts, magnetism and electricity, and zoology concepts including habitats and food webs. Students will refine observation techniques as they continue to develop an understanding of the scientific process through the use of their science notebooks. Students will begin formulating their own independent hypotheses and learn how to support their thoughts with data gathered during experiments.

### CLASS III

Students focus on the four forces of flight and aviation, the properties of water, ocean zones and marine life, and conducting research in the field. The methodology behind field study and the skills needed to conduct research in the field is heavily emphasized this year. Students leave the laboratory on a weekly basis to learn the methods of field study using the techniques modeled on those of field scientists. Students will also be expected to create different types of charts and graphs to depict information and expand their use of technical terms and vocabulary. Science notebook use will continue to develop as students are expected to support their conclusions with evidence gained through careful data analysis.

### CLASS IV

Students study simple machines, celestial bodies, and environments and habitat ecology. Students will examine animal and plant behaviors and adaptations along with the consequences of human involvement. Students will conduct a study of the different types of simple machines with an emphasis on the physics and related mathematics principles around effort and work. There will be a simple machines project at the end of that unit that requires students to build their own machine using what was learned during the trimester. Development of the science notebook will continue as students learn how to isolate variables and examine factors that affect outcomes in experiments. A simplified version of the lab reports used in Class V will be introduced towards the end of the year.

## TECHNOLOGY

### CLASSES K-IV

Our students use technology extensively in the Lower School. All classrooms are equipped with interactive whiteboards and Apple TVs, which enhance interaction with the material as well as collaboration among students; a 1:1 device program begins in Class III. The curriculum teaches students to use the computer as an academic tool as they gain confidence in their ability to explore and create with state-of-the-art technology. Students engage in creative, open-ended problem solving and project-based learning that supports the classroom curriculum, and are taught robotics and programming throughout Lower School, beginning with the use of BeeBots in Kindergarten and continuing through to programming with Scratch and LEGO Robotics. By the end of Lower School, students



have acquired skills in keyboarding, word processing, multimedia software, programming, robotics, design, engineering, web-based research, and digital citizenship skills.

## MODERN LANGUAGES

### KINDERGARTEN SPANISH

The Kindergarten Spanish program is designed to develop students' language skills in the context of authentic situations which encourage active participation, personal interactions and multiple opportunities for oral expression. The year-long country of focus is Mexico and language skills are presented through a thematic based exploration of the various traditions, celebrations and notable citizens which represent this vibrant country. Curricular collaborations with teachers of other subjects allow concepts to be presented and practiced in a familiar context and provide enhanced opportunities for language exposure. By the end of Kindergarten Spanish, students will be able to express basic needs and ask questions using familiar phrases, greet others using a selection of short phrases, describe personal preferences and identify objects using a variety of adjectives. Instilling a love of learning world languages in students and a lifelong curiosity about other cultures are foundational elements of the Lower School Spanish program.

### CLASS I SPANISH

The Class I Spanish program is designed to develop students' language skills in the context of authentic situations which encourage active participation, personal interactions and multiple opportunities for oral expression. The Class I Spanish curriculum is integrated, as it aligns closely with the Class I social studies curriculum allowing for language concepts to be acquired in a meaningful context. The year-long country of focus is Spain and language skills are presented through a thematic based exploration of the various traditions, celebrations and notable citizens which represent this vibrant country. Curricular collaborations with teachers of other subjects allow concepts to be presented and practiced in a familiar context and provide enhanced opportunities for language exposure. By the end of Class I Spanish, students will be able to express basic needs and ask questions using familiar phrases, interview and greet others using a variety of complete sentences, describe daily facts and weather observations independently, express personal preferences and identify objects using a variety of

adjectives in both oral and written form. Instilling a love of learning world languages in students and a lifelong curiosity about other cultures are foundational elements of the Lower School Spanish program.

### CLASS II SPANISH

The Class II Spanish program is designed to develop students' language skills in the context of authentic situations which encourage active participation, personal interactions and multiple opportunities for oral expression. The Class II Spanish curriculum is integrated, as it aligns closely with the Class II social studies curriculum allowing for language concepts to be acquired in a meaningful context. The year-long region of focus is the Caribbean and language skills are presented through a thematic based exploration of the various traditions, celebrations, and notable citizens which represent this vibrant part of the world. Curricular collaborations with teachers of other subjects allow concepts to be presented and practiced in a familiar context and provide enhanced opportunities for language exposure. By the end of Class II Spanish, students will be able to express basic needs and ask questions using familiar phrases, use connecting words to extend ideas into longer sentences, describe daily facts and weather observations independently, express personal opinions and preferences and identify objects using a variety of adjectives in both oral and written form. Instilling a love of learning world languages in students and a lifelong curiosity about other cultures are foundational elements of the Lower School Spanish program.

### CLASS III SPANISH

The Class III Spanish program is designed to develop students' language skills in the context of authentic situations which encourage active participation, personal interactions, and multiple opportunities for oral expression. The Class III Spanish curriculum aligns closely with the Third Grade social studies curriculum allowing for language concepts to be acquired in a meaningful context. The year-long region of focus is South America and language skills are presented through a thematic based exploration of the various traditions, celebrations, and notable citizens which represent this vibrant part of the world. Curricular collaborations with teachers of other subjects allow concepts to be presented and practiced in a familiar context and provide enhanced opportunities for language exposure. By the end of Class III Spanish, students will be able to express a multitude of needs and ask various questions using

familiar phrases, use connecting words to extend ideas into longer sentences and paragraphs, describe elements of personal identity utilizing verbs and descriptive language, express personal opinions and preferences, and identify objects using a variety of adjectives in both oral and written form.

#### **CLASS IV SPANISH**

Over the course of the year, Class IV students rotate through through a trimester of French, Mandarin, and Spanish. In Middle School, they begin the formal study of one of those languages. The initial years of study stress pronunciation, basic vocabulary, culture, and communication.

### **COMMUNITY CLASS**

#### **CLASSES K-II**

In our Community class, students begin their journey of developing a greater understanding of and appreciation for differences. They discover and learn how these differences create a mosaic of human experiences, which are central elements in a fulfilling and enriching learning environment, and in preparing the foundation for a successful life. Through various inquiry-based, individual and small group projects, they are guided and encouraged to see themselves as active and productive participants in creating a better world for themselves and their respective communities.

### **VISUAL ARTS**

Students learn to use different materials, processes, and techniques in order to express their thoughts, feelings, and perceptions. These explorations lead to meaningful connections to their personal interests and experiences, and foster creative responses to new ideas. Inventive work with art materials is accompanied by direct observation of works of art and design. Through the study of works of art, the development of art vocabulary, and the application of new techniques, students learn to produce and interpret visual imagery with confidence and fluency.

#### **KINDERGARTEN**

Students work with a variety of materials including paints, watercolors, crayons, collage, clay, and yarn. Creativity, imagination, and exploration of media are encouraged. The extensive classroom art program, wherein students are introduced to such crafts as sewing, stamp- and print-making, and mixed-media pictures, is enhanced and supported by work in the art studio.

#### **CLASS I**

Students create art in a setting that promotes inventiveness and sharing. Projects are designed to teach basic art concepts and to introduce a variety of media and techniques. Students explore painting, printmaking, collage, and mixed-media sculpture. Observational skills are stressed, and subjects are drawn from the students' own imagination and life experiences.

#### **CLASS II**

Students are encouraged to express themselves by developing an understanding of art concepts and materials. Thoughtful use of color and composition are emphasized while students build three-dimensional objects with moving parts using a variety of tools. Students work individually and in groups, drawing inspiration from direct observation and imaginative invention. Project themes are developed from a child's life experiences and imagination

#### **CLASS III**

The studio curriculum builds upon techniques and concepts introduced in previous grades while providing a wide spectrum of unique expression. Projects become multi-faceted and use inventive combinations of art materials; three-dimensional objects are planned and built using a variety of sculptural materials and tools. Proportion, composition, and color theory are emphasized in the execution of these projects.

#### **CLASS IV**

Students develop skills and art vocabulary learned in previous grades. They directly observe art through the study of reproductions and museum visits. Students combine shapes to construct different sculptural objects; this activity reinforces their knowledge of three-dimensional form. They draw and paint to explore compositional and spatial relationships. Students review simple color theory, practice mixing colors, and explore a variety of brushstrokes and painting techniques.

## WOODWORKING

### CLASSES I–IV

The woodworking program is structured to enhance spatial thinking and develop a student's ability to understand, manipulate, and construct three-dimensional objects. Projects use creative joining techniques and a wide range of materials including wood, stone, and clay. Students learn the safe and effective use of a variety of tools in the woodworking studio.

## VISUAL EDUCATION

### CLASSES K–IV

The program in visual education incorporates works of art into the teaching of subject areas such as English, social studies, geography, math, modern languages, technology, and art. Students learn to observe and analyze visual images and discuss them with reference to formal qualities as well as historical and cultural context. Through studying these images, students develop the ability to express and support their interpretations while learning to value the ideas of others. Students combine visits to local museums and cultural institutions with classroom work in the form of discussions, writing, and art-making activities.

## PERFORMING ARTS

### DRAMA

Children develop a variety of communication skills through drama and develop ways to participate as both members of a group and as leaders. An emphasis on ensemble work within the classroom encourages students to become responsible members of a cohesive group.

## MUSIC

Lower School students attend music three times per eight-day schedule cycle in groups of approximately 15 students. Each music class consists of singing, movement, instrument playing, dramatic play, and improvisation. Students learn to take risks, listen intently, collaborate, and trust their inherent musical instincts. Music literacy and performance skills are taught sequentially using materials in the classical, folk, jazz, traditional, and world-music genres, fostering global awareness in the classroom.

In addition to her regular music classes, each Lower School student has a once-a-cycle “Sing” period, where the entire grade comes together in the blackbox theater space. This meeting is used for whole-group singing and dancing, acting out folk tales, writing songs, and developing performance repertoire outside of dedicated music class time.

Lower School students perform throughout the year in concerts and special assemblies, including the Lower School Winter Concert, Grandparents and Special Friends Visiting Day, and grade-level presentations. Students have the opportunity to study musical instruments and voice privately after school for an additional charge.

### KINDERGARTEN

In Kindergarten, music class centers on developing the most basic and essential musical skills: matching pitch and keeping a steady beat. Singing, movement, instrument playing, and dramatic play are incorporated into every class. As with learning any language, students become fluent musicians through exposure to a wide and plentiful variety of music. The students hone careful listening skills, differentiating between fast and slow, high and low, up and down, and speaking and singing voices. The Kindergarten class presents a program of music, dance, and poetry recitation in the spring of each year.

### CLASS I

Class I students learn to read rhythms containing quarter notes, eighth notes, and quarter rests. Mi, sol, and la solfège syllables are taught with corresponding Curwen hand signs, kinesthetically anchoring pitch in order to enhance vocal accuracy. Class I students explore a range of pitched and unpitched percussion instruments from around the world, drawing connections based on instrument material and technique. Part-singing is introduced through ostinatos, rounds, and partner songs.

### CLASS II

Class II students expand their melodic vocabulary, reading and writing melodies on the musical staff using solfège syllables and Curwen hand signs. Musical independence is developed through part-singing and playing increasingly complex arrangements for voice and Orff instruments (xylophones, glockenspiels, etc.). Each February, Class II students present a program of poems and original songs related to their year-long study of New York City, integrating music, dance, social studies, and English.

**CLASS III**

In Class III, music fundamentals are enhanced through a year-long exploration of repertoire in the universal pentatonic mode. The music literacy curriculum focuses on basic note values, treble clef note identification, solfège, tempo, and dynamics. All students learn to play the recorder, which is an accessible tool for note-reading practice, as well as basic instrumental technique. Unison choral singing builds pitch-matching skills and develops good vocal health. In the spring, Class III students study music in relation to their social studies curriculum, culminating in a presentation that features intricate instrumental arrangements and original student choreography.

**CLASS IV**

In this capstone year, Class IV students continue their study of the recorder, anchoring their note reading in the treble clef and performing increasingly complex instrumental and choral arrangements. The spiral music literacy curriculum that was started in Kindergarten reaches a meaningful endpoint in the study of the half steps and whole steps of the major diatonic scale and the basic harmonic function of I and V chords. Class IV students additionally receive a formal introduction to the three “tracks” offered to Middle School musicians—composition, strings (violin/viola/cello), and guitar.

**PHYSICAL EDUCATION****CLASSES K–IV**

The physical education program fosters the enjoyment of movement and the development of self-confidence; it emphasizes a variety of motor and sports-related skills, as well as health-related fitness. Students are introduced to bouldering and Parkour movements that promote body awareness, opportunities for growth through risk taking, and problem-solving skills. In addition, physical education classes provide opportunities for growth in socialization, sportsmanship, and cooperative play. Once per eight-day schedule cycle, Class IV has a longer period that allows us to teach swimming at the 92nd Street Y. The physical emphasis in Classes K–II is on teaching fundamental motor, manipulative, and sport skills. As the students gain greater proficiency in Classes III and IV, they incorporate more complex, specialized skills and simple strategies into modified competitive games. Class I and Class IV each present an annual physical education demonstration in the spring, focusing on the skills they have learned.

**DANCE****CLASSES K–IV**

Designed to enhance each student’s ability to enjoy and appreciate dancing, the Lower School dance curriculum includes proper warm-up techniques, fundamental movement components, rhythm, motor skills, and creative movement concepts. Through the study of both classical and modern dance techniques, the teachers focus on developing body awareness, coordination, and an appreciation of dance. Students learn that dance can be a meaningful, enriching part of their lives.

**LIBRARY****CLASSES K–IV**

The Lower School library seeks to ignite imagination and a sense of wonder, laying the foundation for a lifelong love of reading and research. In the library, students are encouraged to explore and be inspired while cultivating critical information literacy skills. In addition to library texts, students are given opportunities to experience stories through poetry, theatre, art, and song. The Lower School library program is designed to develop the individual reading interests of each student, support the curriculum, and teach research and information practices. The library is open to students throughout the day. Students visit the library individually and in small groups to choose books suited to their reading levels and interests. Kindergarten, Class I, and Class II students come to the library each cycle for class. Class III and IV students visit the library on a flexible schedule based on research and reading group needs. Through a wide range of resources, the library connects students with stories and information representative of the diversity of the Nightingale community, New York City, and beyond. Interwoven with the Lower School curriculum and in collaboration with classroom teachers, the library designs and supports research projects using an inquiry-based model. In each successive year, the library curriculum builds upon previous learning to prepare students with the information literacy skills they will need as they move into Middle School.

**HEALTH****KINDERGARTEN**

Social and emotional well-being is fostered throughout students’ days in the Schoolhouse. In Kindergarten, students become acquainted with the



nurse's office, basic hygiene including preventing the spread of germs, and trusted adults who can be resources within the school community. Students are encouraged to try new foods at lunch, and the importance of a colorful plate is emphasized.

#### **CLASS I**

Class I health focuses on the mind and body. Mindful thinking and behavior are introduced and practiced throughout the semester. Students learn about the brain and body, naming body parts and understanding their basic functions while identifying best practices in hygiene, self-care, and safety. Students study nutrition, learning about food groups and eating a colorful plate. With a focus on identity and relationships, stories, puppets, and role play are used to practice identifying emotions and communicating feelings and needs. Students also work on developing and expressing empathy for others.

#### **CLASS II**

Class II health focuses on the mind and body. Mindful thinking and behavior are reviewed and practiced throughout the semester. Class II students work on decision-making skills using a "stop, slow, go" model, and practice using this model with real-life health scenarios. Through the use of stories, puppets, and role play, topics addressed include healthful eating behaviors, gender, human development, medicine safety, mindfulness, relationships, and self-esteem.

#### **CLASS III**

Students in Class III health build upon decision-making skills practiced in Class II. Students identify and analyze influences on decisions, including the role of peers, role models, and advertisements, building media literacy skills along the way. Class III health devotes plenty of time to understanding and caring for mind and body. Topics addressed include body systems, mindfulness, relationships, and nutrition.

#### **CLASS IV**

Class IV health focuses on body image, human development, and relationships. Students learn about puberty and reproduction with plenty of time devoted to understanding periods and self-care during menstruation, maintaining positive body image during puberty, and navigating friendship changes and challenges. Safety during late childhood and preadolescence is addressed, and students develop skills to establish body boundaries and to access support from trusted adults.

## **COMMUNITY ENGAGEMENT**

Community service has been a cornerstone of a Nightingale education since the school's founding almost 100 years ago. In the Lower School, the students participate in group projects, which have the goal of instilling a love of giving to others and improving the community. Service is closely tied to the curriculum. The Lower School has had a long partnership with the All Souls Friday Lunch where students in class IV volunteer to serve lunch with guests and organize food drives supported by the entire school. Other Lower School projects have included designing, creating, and utilizing tools to clean up trash in Central Park (Kindergarten) and creating friendship bracelets for migrant children and selling reusable straws in class bags to support clean water projects as part of the human rights curriculum in Class III. When direct service is not possible, students have found creative ways to support the essential workers of New York City by making and sending thank you notes.

## **HOBBYHORSE**

Hobbyhorse is Nightingale-Bamford's extended day afterschool program. Twelve to fifteen courses are offered at an additional fee each trimester. Classes may include:

- Breakdancing
- Chess
- Coding
- Cooking
- DramaZone: Musical Theater
- Fashion Tech
- Ice Skating
- Jazz Dance
- Lacrosse
- Make + Wonder Art
- Outdoor Sports
- Painting
- Photography
- Recycled Art
- Robotics
- Sewing
- Sketching and drawing
- Soccer
- The Craft Studio
- Tennis
- Yoga

A photograph of two students, a girl and a boy, working together in a workshop or lab. They are both wearing safety goggles and are focused on a task in front of them. The girl is on the left, wearing a patterned shirt, and the boy is on the right, wearing a striped shirt and an apron. They are in a room with various equipment and materials on tables in the background.

# Middle School

The Middle School program, Classes V–VIII, addresses the special needs of early adolescents and is a transitional period between the child-centered approach of the Lower School and the college preparatory, curriculum-based emphasis of the Upper School. Students are helped to grow and develop academically, as well as morally, aesthetically, emotionally, and socially. It is our goal to encourage each student to sample many kinds of activities, to learn where her real strengths and interests lie, and especially to grow in competence, confidence, and initiative.

The Middle School provides a strong academic program in which study skills, strategies, and leadership competencies complement the content to be mastered. Small, structured classes encourage a lively exchange of ideas and the exhilaration of being part of an exciting academic enterprise. The curriculum focuses as much on how to learn as on subject mastery. During these years, it is important for students to consolidate their skills; therefore, students are taught how to listen, follow directions, organize materials, keep track of homework assignments, manage their time, take notes, develop individualized study skills, defend an argument, communicate through writing and speech, and produce independent research projects. Students use a broad range of technological resources to support their learning and creativity in the classroom. During a period called Enrichment, daily “labs” are available for students who need or want extra help with their work or who wish to explore a particular academic subject in greater depth. In addition to encouraging students to ask for help, this period allows students to find balance through offering study halls and the opportunity to enjoy supervised time on the rooftop playground and in the gymnasium, library, study halls, art and music rooms, and maker space.

Central to the Middle School, the advisory program ensures that every student in the division is known and supported. Students meet at least twice per schedule cycle with their advisor or dean in either a small group or one-on-one setting. As the primary liaisons between the student and her teachers, the advisor and dean, in conjunction with the Middle School administration and student’s family, support and advocate for each student, facilitating the total development of her intellectual and social-emotional growth within a supportive community. The advisory program fosters a culture of open communication through informal discussions about relevant school-specific and current events topics, as well as through a formal identity-based social-emotional and anti-racist curriculum. Through the curricular component of the advisory program, each student learns how to advocate for herself and others, deepen her awareness of herself and others, understand the power of words, and acquire language necessary to support social and racial justice and maintain an inclusive community. Students also learn how to develop their decision-making skills, engage responsibly with social media and technology, and cultivate healthy relationships, among other topics. In addition, each student will receive guidance in understanding her learning style and developing brain and managing her responsibilities as she adjusts to an increasingly demanding program.

Academics are complemented by a rich array of offerings in art, drama, and music, with a focus on creativity and self-expression. The physical education curriculum and extracurricular athletic teams promote physical fitness, skill development, and sportsmanship.

Clubs are an outlet for individual interests and talents. Trips complement and augment the curriculum through offering immersive learning and leadership opportunities that amplify the student voice.

## ENGLISH

Love of reading and confidence in writing are key goals of the English program. Composition classes emphasize clear structure, vivid expression, and the logical development of ideas. Creative writing is also an integral part of the study of English in these years. Students read short stories, plays, novels, biographies, and poems, both canonical and contemporary. At all levels, the English Department believes in the value of interdisciplinary education, teaching students about books in their historical context and making comparisons to other art forms. Students are given the opportunity to write about a range of topics, both literary and political.

## CLASS V

Students have five periods of English per eight-day cycle. The focus is on reading fiction and poetry and on the development of oral expression and writing skills. Class time is also devoted to vocabulary-building, spelling, grammar, study skills, and poetry recitations. The literature studied includes novels by Mildred O. Taylor, Gloria Whelan, Linda Sue Park, and Elizabeth G. Speare, with investigations into the historical background of the novels. The Class V English program dovetails with our visual education program, as students learn to write about images as well as stories (for example, examining the symbolism of portraits or composing poems based on paintings).

## CLASS VI

Class VI students read and discuss a variety of fiction and nonfiction, including *Black Ships Before Troy* and Greek mythology, which is linked to their study of the classical world in Latin and history. Other texts include Julia Alvarez's novel *Before We Were Free* and William Gibson's play *The Miracle Worker*. Students learn to analyze and write creative responses to novels, short stories, and poems. They also begin to write formal essays with thesis statements, practice peer review, and learn basic library research skills. Grammar study includes parts of speech and the rules of punctuation. Declamation and performance help the students learn articulation and confidence in public speaking. Weekly writing workshop activities and visual education lessons round out the Class VI curriculum.

## CLASS VII

"Coming of Age in America," an experience as varied as the individuals who live in the United States, is a key theme of Class VII English. Students read classics of Anglo-American literature, such as *The Outsiders*, *A Raisin in the Sun*, *The House on Mango*

*Street*, and *Animal Farm*, and immerse themselves in several poetry units throughout the year. Students are introduced to the drama of William Shakespeare through a close reading of *A Midsummer Night's Dream*. In addition to experiencing Shakespeare's romantic comedy on the page, they work on scenes with a professional actor in a two-week acting workshop. Class VII students work on writing, grammar, punctuation, and vocabulary in conjunction with their reading.

## CLASS VIII

Class VIII explores the individual enmeshed in a web of cultural, political, and economic systems. After discussing and writing about their summer reading, Elizabeth Acevedo's *The Poet X*, students study other coming-of-age texts from a variety of perspectives: Jacqueline Woodson's *Another Brooklyn*, Tobias Wolff's *This Boy's Life*, and Trevor Noah's *Born a Crime*. In the spring, students read Arthur Miller's *The Crucible*, Shakespeare's *Macbeth*, and—during a creative non-fiction unit—a selection of essays by canonical as well as lesser-known writers as models for their own essay writing. Grammar and vocabulary building are important elements of the course, and students have frequent writing assignments. A two-week acting workshop, taught by a professional actor, prepares students to perform scenes from *Macbeth*.

## HISTORY

The Middle School history program builds upon the factual and conceptual foundations developed in the Lower School. The development of key skills is an ongoing priority; these include note-taking, creating and defending an argument, paragraph and essay writing, listening deeply and speaking confidently, and the research process. Geography is an integral part of the study of the political, social, and economic history of a specific region. This interdisciplinary program includes art, literature, and films, in addition to collaboration with the art, English, and modern language departments, among others.

## CLASS V

## Ancient Civilizations

What is ancient history? Why study it? How can we know what happened in the ancient past? What is civilization? Why did early civilizations develop in river valleys? What elements of early civilization can we observe around us today? Class V history students address these questions and more, within the context of investigating early humans and three ancient civilizations: Mesopotamia, China,

and Egypt. We study prehistoric hunter-gatherers; factors associated with the Agricultural Revolution; and early civilizations that developed along the Euphrates, Tigris, Huang He, Yangtze, and Nile Rivers, respectively. Students recognize the major common elements of human civilizations, with special attention paid to the pivotal role of writing as both a factor in the development of, and material record of, many early societies.

Class V students of history cultivate the skills of thinking and writing historically by engaging in close inquiry into primary sources, and regularly reflecting on these sources in their own writing. The written records left behind by ancient Mesopotamians, Chinese, and Egyptians provide very rich material with which to practice these critical skills. As historians, students employ primary sources to compose a meaningful narrative of our shared past; ask complex questions about that past; and identify and describe past-present connections. As they collaborate to construct coherent narratives of the past and to locate themselves (and the constructions of their own identities) in time and place, Class V history students are challenged to critique existing dominant narratives—particularly those that have excluded marginalized voices. Our summer reading novel, *The Wadjet Eye* by Jill Rubalcaba, provides an engaging context in which to confront these and other issues.

As Class V history students compose writing projects of varying degrees of structure, they learn to consider purpose, context and audience. They debate big questions regarding disputed museum artifacts and water rights, among others. Finally, our learning is enhanced by multiple field trip opportunities, including the American Museum of Natural History, the American Folk Art Museum, and the Brooklyn Museum.

## CLASSES VI

### World Cultures and Geography

Through the lenses of human and physical geography, Class VI history students investigate peoples, cultures, and belief systems, with specific focus on the following regions: Asia, North Africa, Europe, and the Americas. Students begin the year developing geo-literacy, which The National Geographic Society defines as “the understanding of the Earth’s systems, the interconnections of those systems, and the implications of decision-making on the future of our Earth.” As they cultivate geo-literacy, history students develop awareness of the ways in which geography and culture have mutually shaped each other over time. Through the study of geographical regions, Class VI students engage in a comparative study of world religions by: understanding their respective

origins stories; recognizing patterns and shared elements across multiple religious traditions; and identifying and respecting the rituals and practices that unite followers and sustain their communities. Importantly, students consider the reciprocal impact of geography and religion. *The Night Diary* by Veera Hiranandani, our summer reading novel, helps to provide context for this conversation.

Class VI students build upon the skills of thinking and writing historically introduced in Class V. Thinking and writing historically relies on one’s ability to interpret, evaluate, and manipulate primary-source material. As historians, students are encouraged to compare multiple sources representing diverse perspectives, identify contradictions, and confront the complexities of our human past. Class VI students are encouraged to challenge existing dominant narratives, and to seek out and center historically marginalized voices.

Class VI history students engage in multiple writing and research projects of varied length and complexity. We will construct a “living” topographical map, to which pertinent details and locations are added throughout the year, creating an evolving reference and learning tool. Field trips opportunities include visits to the Seneca Village site in Central Park, the Metropolitan Museum of Art, the Rubin Museum of Art, and the African Burial Ground.

## CLASS VII

### Democracy, Civics, and Advocacy: Greece, Rome, and American Government

This course focuses on democracy and citizenship in the United States and in antiquity. Students begin with a study of the roots of that democracy—ancient Greece and Rome. For each of these civilizations, students examine geography and its effects on the development of society, as well as archaeological discoveries that help us to understand early cultures, daily life, religion, the arts, and government. Next, students explore the American system of government and its development as they learn about the roots of colonist rebellion, the Constitution, and the foundation of American government. Throughout, students will consider whether our country’s founding principles are truly inclusive and focus on the study of marginalized groups and native History. The year culminates in a trip to Washington, D.C., where students take on a leadership role and are able to explore our democratic institutions firsthand. In this course, special emphasis is placed on synthesis of multiple viewpoints and evidence to defend an argument. Critical reading, writing, research, note-taking, and public speaking skills are reinforced throughout the year.



**CLASS VIII****American Freedom: Historical Memory and Human Rights / Race, Racism, and Anti-Racism in America**

Class VIII American history centers on the essential question, “To what extent has the United States fulfilled its promise of liberty, justice, and equality for all?” The course begins with an examination of contemporary racism and anti-racism in America, from voter suppression to mass incarceration to the school-to-prison pipeline. It is followed by a study of slavery and its expansion and the Civil War, after which students explore the failures of Reconstruction and the racial violence that resulted. Students consider whether the policies and programs stemming from the New Deal, immigration, growth of cities, Progressive Era, and Gilded Age were truly inclusive. Class VIII studies the Civil Rights Movement in-depth, in addition to lessons on Black Power and Black Pride, as preparation for their trip to Alabama, where they visit Civil Rights landmarks firsthand and explore the powerful National Memorial for Peace and Justice and Legacy Museum. Students then learn about other rights movements, including suffrage, women’s rights, gay rights, transgender rights, native rights, and disability rights, considering what makes an effective rights movement. The course culminates in the crafting of student proposals for their “own” memorials devoted to figures elided by history; this project involves research, analytical writing, design, and oral presentation elements.

**MATHEMATICS**

The mathematics program in Classes V–VIII focuses on solidifying fundamental arithmetic skills and applying them to problem solving, leading to the formal study of algebra. Students become confident in their ability to think and express themselves clearly in the language of mathematics.

**CLASS V**

Students begin the year by applying their knowledge of whole number arithmetic to new concepts including order of operations and evaluating exponential expressions. They are introduced to number theory, including divisibility rules, factors, and multiples. An exploration of fractions leads to addition and subtraction of fractions, mixed numbers, and decimals. Students learn multiplication and division of fractions through context-based explorations. A deep study of ratios and proportions leads students to a conceptual understanding of percent. Students are introduced to operations with integers and the coordinate plane.

They investigate unit conversions and two-dimensional geometric concepts, including angle relationships. A focus on estimation and mental math as a means to improve number sense is reinforced throughout the year.

**CLASS VI**

Students solidify the skills of arithmetic and integer operations and prepare for the more abstract thinking required by subsequent courses. Teachers combine the traditional presentation of pre-algebra concepts and principles with innovative class activities, problem solving techniques, and online technological support. Students explore solving one-step and two-step equations and inequalities and how to graphically represent the solutions. They review decimals, fractions, and rational number theory, and interact with irrational numbers and square roots for the first time. Students use this in work with ratios, proportions, and percent. Measurement, the Pythagorean Theorem, and two- and three-dimensional geometry, including surface area and volume, help students develop their spatial reasoning and awareness. Students also practice graphical representation of data and investigate fundamentals of probability.

\*Advanced topics may include in-depth exploration of writing and solving multi-step equations and inequalities and practical applications of algebraic and percentage concepts.

**CLASS VII**

In this pre-algebra class, students transition to a more abstract approach to mathematics. An essential component to Math VII is the application of all pre-algebra skills to real-life problems. Students solidify their skills in solving multi-step equations and inequalities. They delve into a formal discussion of properties of exponents and an in-depth investigation of ratios, proportions, and percent. Algebraic manipulation and graphical representation of linear functions reinforces the shift into abstract thinking. To reinforce the application of the Pythagorean Theorem, students work with radicals and irrational numbers. Students explore three-dimensional geometry, and a crucial component to this year’s study is the derivation, application, and analysis of formulas for composite figures. A more detailed investigation of probability and statistics closes out the year.

\*Advanced topics may include negative exponents, operations with radicals, distance and mid-point formula, special right triangles, and an introduction into rational expressions.

## CLASS VIII

### Algebra I

In this formal study of algebra, students explore solving and graphing linear and absolute value equations and inequalities, including systems of linear equations and inequalities. Students are introduced to function notation and begin to conceptualize functions' properties on the coordinate plane. An extensive study of quadratic expressions, equations, and graphs is essential to the year's study. Throughout the course, students learn to use these skills to solve real-world problems. Students devote time and attention to building their proficiency in factoring polynomials. They develop their abstract understanding of extraneous and non-real solutions through a deep study of rational and radical expressions and equations.

\*Advanced topics may include solving exponential equations, completing the square, and right triangle trigonometry.

### Accelerated Algebra

Students embark on an advanced, formal study of algebra. Students delve quickly into the study of functions. They explore the graphs and solutions of functions of various types, especially quadratic, exponential, rational, and radical. An in-depth study of function transformations, combinations, and compositions provides Accelerated Algebra I students a unique challenge in Class VIII. Operations with polynomials and systems of quadratic and linear equations are also essential to the year's study. Students begin to explore the abstract connection between right triangle and unit circle trigonometry. Throughout the course, students use these skills to solve real-world problems, learn to create mathematical models using regression software, and develop coding skills using TeXShop. Additional topics may include probability, sequences and series, and matrices.

## SCIENCE

Middle School science courses stress the development of laboratory skills, problem solving, and an understanding and application of the scientific method. Starting in 2019–2020, the science curriculum in Classes V and VI will follow a two-year sequence, with a focus on human body systems.

## CLASS V

### The Science of Me

This course includes the study of fundamental concepts of chemistry and physics through the lens of the human body and the 11 major body systems. Emphasis is placed on the development and application of the scientific skills of inquiry, observation, measurement, and recording data. Students apply their knowledge and build skills through the practice of formal laboratory procedures and the use of various laboratory and medical equipment. The goal of this course is to lay the groundwork for students' future study of interdisciplinary science in Class VI.

## CLASS VI

### Nightingale and Bamford:

#### Special Agents Unit (SAU)

The sixth grade curriculum builds on the skills and concepts of The Science of Me course in Class V. Students explore topics across all disciplines of science through the lens of forensic investigation, including fingerprint and hair analyses and examination of chemical and genetic evidence. Each unit strengthens scientific skills by providing opportunities for systematic observations, the use of tools (such as the microscope), evidence collection, evidence analysis, and the communication of conclusions. The goals of this course are to encourage students to take risks in their learning and to embrace uncertainty. After all, not all cases are closed!

## CLASS VII

### Earth Science

This course is an introduction to the three major disciplines that relate to earth science: geology, hydrology, and astronomy. Students develop a deeper understanding of the forces that constantly affect and reshape the earth. They are also encouraged to develop a consciousness of their impact on the planet and ultimately their place in the universe. Topics covered include weathering, plate tectonics, earthquakes, volcanoes, paleontology, rocks and minerals, hydrologic cycles, the solar system, and galaxies. Activities, laboratory exercises, and assignments are designed to develop important analytical and critical problem-solving skills, and to emphasize the use of technology and the applications of concepts to everyday life.

**CLASS VIII****Physical Science**

This course establishes a foundation for both physics and chemistry via a thorough conceptual understanding of matter and energy. Topics studied include measurements, motion, forces, work, mechanical and thermal energy, states of matter, atomic structure, bonding, and chemical reactions. Building on the algebra skills acquired in Middle School and using interactive simulations, mathematical representations of scientific phenomena are explored, and analytical thinking and problem-solving skills are advanced. Through frequent laboratory activities, skills of observation, measurement/quantification, data visualization, data analysis, and scientific communication are developed and refined.

**CLASSICS****LATIN**

All students in Classes VI–VIII study Latin, the foundation of all Romance languages. By the end of Class VIII, students will have acquired a large amount of vocabulary and will have gained a firm grounding in the basic morphological and syntactical structures in preparation for reading authentic Latin texts in Class IX.

**CLASS VI**

After a brief introduction to the history and development of the Latin language, Latin pronunciation, and some basic vocabulary and useful expressions, the class begins to use the textbook series *Ecce Romani* as the foundation of their Latin study. Through the reading method, the series introduces the workings of a highly-structured, inflected language, with increasing emphasis on vocabulary building and the study of derivatives in English and the Romance languages. The class also addresses cultural topics such as slavery and Roman dress, and explores the mythical beginnings of Rome from the Trojan Wars to its founding.

**CLASS VII**

The course begins with a review of the previous year's work and subsequently introduces the complete active verbal system and all noun and adjective declensions. Important elements of Roman culture and daily life, such as Roman administration and aqueducts, are also addressed, while historical material covered ranges from the period of the Roman kings up to the time of the Punic Wars.

**CLASS VIII**

The course begins with a review of the previous year's work and subsequently covers more advanced grammatical concepts, such as the passive voice, infinitives, participles, and the subjunctive mood. Important elements of Roman culture and daily life, such as Roman education and cuisine, are studied along with a historical survey of the era from the late Republic to the Age of Augustus.

**MODERN LANGUAGES****FRENCH/SPANISH****CLASS V**

French and Spanish courses are taught almost entirely in the target language. Students learn to spell and ask for directions from the teacher in the language of instruction. The goal for each student is a high degree of active proficiency in the areas of speaking, writing, listening, and reading. Culture, art, and history are contextualized in the lessons so that students acquire not only the more practical notions of language but also a broader understanding of the usefulness of French and Spanish in a global society. Students learn the intricacies of number, gender, and case, and are able to describe people and things, discuss their school subjects and daily lives, and locate French and Spanish-speaking countries on a map. Students also develop their ability to express courtesies, count and tell time, talk about food, identify objects related to the home, and use basic verb paradigms to express actions. This course may be repeated for a second year if a student requires more time to consolidate her familiarity with the material.

**CLASS VI**

With the continued emphasis on oral and written communication, MS Intermediate students acquire more regular and irregular verbs and use them to narrate in the present, near future, recent past, preterit, and simple future tenses. Direct and indirect object pronouns are introduced in order to allow the student to acquire language that imitates normal usage by native speakers. More in-depth thematic vocabulary is introduced as it relates to travel, sports, clothing, personal hygiene, health, leisure activities, and finance. Students also discuss the differences between American schools and those in foreign countries in which French and Spanish are spoken. This course may be repeated for a second year if a student requires more time to consolidate her familiarity with the material.

### CLASS VII

Students at this level learn to distinguish between the use of the imperfect versus the preterit, as well as the present perfect tense. Through translation exercises and compositions, students learn that there are many ways to express ideas from one language to the next. As with previous coursework, they are required to use verbal and written exchanges to solicit personal information, give and follow directions, and use command forms with a high degree of accuracy. The thematic vocabulary covered includes words particular to personal correspondence, organizing festivities, media, using the telephone, and style and design. More in-depth readings on a variety of topics from celebrities, science, and art are included. This course may be repeated for a second year if a student requires more time to consolidate her familiarity with the material.

### CLASS VIII

This course begins with a thorough review of all previous material, as repetition and practice are necessary at this stage in second language acquisition. Statements with “if” clauses, relative pronouns, and the subjunctive are introduced and occupy a significant amount of instructional time in the second semester. Thematic vocabulary covered includes national lifestyles, national holidays, specific items related to national history, French and Spanish colonies, agriculture, and professions.

## MANDARIN CHINESE

### CLASSES V AND VI

The early years of Mandarin study concentrate on the fundamentals of reading, writing, and speaking. Students learn to read and write several hundred of the most commonly written Chinese characters. As with any beginning language course, the focus is on practical skills and vocabulary relevant to the daily lives of students. This course requires a considerable amount of memorization, especially given the use of characters in writing.

### CLASS VII

In Class VII Chinese, students review the vocabulary and syntax covered in earlier years of study while increasing their repertoire of Chinese characters. Authentic texts are incorporated in the instruction to allow students to contextualize their use of specific thematic vocabulary. This course is primarily for students in Class VII. It may be repeated for a second year if a student requires more time to consolidate her familiarity with the material.

### CLASS VIII

This course begins with a review of vocabulary and grammatical structures from earlier years of study. Students then move on to new themes to deepen their communicative and reading skills. New topics include giving directions, national holidays, vacation, classical stories, China's geography and demographics, manners, and etiquette. As students advance in their oral language capabilities, they broaden their ability to describe their academic and home lives, as well as make comparisons to their peers in China. During the second half of this one-year course, the focus turns to more advanced grammar and conjunctions, enabling students to produce increasingly sophisticated written work. Ultimately, students are expected to be capable of writing short narratives, stories, and dialogues of 300 words or more.

## SKILLS

### CLASS V

All Class V students take a year-long course that emphasizes specific tools and strategies to help them develop executive functioning skills, as well as an understanding of how to learn and study with success.

### CLASSES VI–VIII

In small groups that meet four times per eight-day schedule cycle, students with a Latin exemption learn study skills strategies that promote organization, time management, reading comprehension, note-taking, writing, memorization, and test preparation. Students learn how to apply these skills to their homework, in-class writing assignments, and tests, and special attention is given to the personal needs of each student. Opportunities for individualized instruction allow for reinforcement of content material and setting of academic goals. The objective is to teach strategies that promote self-awareness, self-advocacy, and successful learning. Skills classes are taught by the learning specialists, who also serve as coordinators and liaisons with teachers, parents, and outside support services.



**COMPUTER SCIENCE****CLASS V**

Students begin by developing the basic set of technology skills necessary to be successful in Middle School. Emphasis is also placed on digital citizenship, with lessons on online communication and building a positive digital footprint. Throughout the course students learn about programming using block-based coding applications, explore physical computing elements, examine engineering and robotics basics, create circuitry design projects, and learn how to use 3D modeling applications.

**CLASS VI**

Students continue developing their programming skills using block-coding platforms, microprocessors, and robotics. They conduct an in-depth examination of 3D design in which they explore several 3D design and modeling applications. Students build upon their technology skill set while learning Adobe Photoshop, iMovie, and other relevant programs. Digital-citizenship instruction includes a focus on digital footprint, social media, and cyberbullying.

**CLASS VII**

Students continue building their programming skills through an introduction to text-based coding and work with microcontrollers. During the year, they gain experience using the laser cutter through vector design applications. In addition, they build upon their technology skill set by gaining experience using Google Sites, Adobe Illustrator, and other relevant programs. Digital-citizenship instruction continues to focus on social media and cyberbullying.

**CLASS VIII****Introduction to Programming**

Over the course of the year, students are introduced to universal programming concepts and strategies. Students begin in a block-based programming environment, and—as they build and develop their skills—gradually transition to a text-based environment where they are introduced to the Python programming language. At all stages in the course, students engage in debugging and computational exercises designed to prepare them for more advanced programming experiences.

**HEALTH EDUCATION****CLASS V**

Class V students participate in a semester-long health course that establishes the foundation for health and wellness education in Middle School. With a focus on decision-making, communication, and self-care, students explore identity, relationships, and issues facing pre-adolescents. A safe and inclusive classroom environment is established where students prepare to navigate the transition from childhood to early adolescence.

**CLASS VI**

Building on the skills introduced in the Class V curriculum, students in Class VI will delve further into issues of early adolescence. Decision-making, communication, and media literacy skills will be practiced. Topics addressed include human development, nutrition, relationships, social media use, and substance use prevention. Students take a personal safety course where they focus on establishing body boundaries, street safety, and handling challenges in peer relationships.

**CLASS VII**

Class VII students participate in a semester-long health course where they focus on skills including decision-making, healthy stress management, media literacy, and values clarification. Students practice these skills through real-life health scenarios to feel prepared for handling challenges of early adolescence. Topics addressed in Class VII health include healthy communication, gender and sexuality, sleep hygiene, and substance use prevention.

**CLASS VIII**

Students in Class VIII take part in a semester-long health course. Students look at relevant health topics through the lens of decision-making, communication, and building/maintaining healthy relationships. Students will explore adolescent health issues in preparation for their Upper School years with the goal of taking increased responsibility for personal health and begin to individually define what health is at this stage in their lives. Students take a personal safety course that focuses on setting boundaries in early dating/romantic relationships, threat assessment and street safety, and practicing verbal and physical self-defense skills.

## VISUAL ARTS

The Middle School offers a wide variety of art courses, including 2D and 3D Art, Photography, Ceramics, Painting, Video, and Museum Studies. In Class V, the school year is divided into trimesters as students rotate through three different art courses. In Classes VI, VII, and VIII, students rotate through two different semester-long art courses. In each course students learn new technical processes while working with a wide range of materials. Their assignments are designed to increase observational skills, encourage innovative thinking, recognize intuition, and develop a sense of what is visually thought-provoking. In addition to the art-making process, students study works of art in the classroom and at various nearby museums, including the Metropolitan Museum of Art, the Guggenheim Museum, and the Jewish Museum.

### CLASS V

#### **Ceramics, Photography, 2D Art**

In ceramics, students focus on hand-building techniques. As they gain technical skills, they will also explore aspects of the creative process, including idea development, problem solving, and self-expression. In the photography course, students acquire skills in the darkroom and learn the rudiments of this art through experimentation with pinhole cameras, photosensitive materials such as film and paper, and compositions with light. In the 2D art course, students explore the fundamentals of painting and drawing, using their own face as a point of departure.

### CLASS VI

#### **Design Principles and Techniques in 2D and 3D, Photography**

In this course, students will apply the principles and elements of design in both two and three-dimensional materials. Line, color, shape, value, texture, form, and space will be explored in drawing, painting, and sculpture. New techniques and materials will be introduced throughout the semester. In photography, students will begin using 35mm film cameras, working in black and white. Concentrating on framing and composition, they will learn to process their own film and master basic printing techniques.

### CLASS VII

#### **Ceramics, Museum Studies**

In Ceramics, students will use slab and coil techniques to produce sculptural containers, and they will use the pottery wheel to develop new skills and make small pots. Museum Studies is a global survey of mark making from Paleolithic cave paintings to the present day. Students will be encouraged to hone their observational and critical thinking skills through classroom discussions and in-person and virtual trips to area museums and local landmarks.

### CLASS VIII

#### **Introduction to Video**

This entry level course introduces strategies and basic skills for visual and audio production. Students produce several videos varying in length from 30 seconds to three minutes, taking each project from pre-production to editing. Although the primary emphasis is on production, students will also view and analyze selected videos from various sources, while learning and applying the essential tools of media and news literacy.

### CLASS VIII

#### **Global Collaborations**

In Global Collaborations, we will explore what it means to be a global citizen and discuss a broad range of topics including social, political, and environmental issues and how they affect diverse populations. As a group, we will design and construct a collaborative painting project with other classrooms around the world.

## VISUAL EDUCATION

### CLASSES V–VIII

The program in visual education incorporates works of art into English, history, classics, modern languages, technology, and art classes. Students learn to observe and analyze works of art and discuss them with reference to formal qualities as well as historical and cultural context. Through studying visual images, students learn art history and develop the ability to express and support their interpretations while learning to value the ideas of others. Students combine classroom work with visits to local museums and cultural institutions.

## DRAMA

All Middle School students receive theatrical training with an emphasis on self-discipline, responsibility, teamwork, and confidence.

### CLASSES V AND VI

Students in Classes V and VI take a trimester of drama and present a small play for their parents and the Middle School. In addition, Class VI presents a full-scale musical production in the fall with the boys from the Allen-Stevenson School.

### CLASS VII

This class focuses on basic skills of musical theater and dance in preparation for Class VII's annual all-class musical production. In addition, students may choose to perform in a dramatic production presented each spring with the boys from the Allen-Stevenson School. As an introduction to the Upper School, Class VII students may participate in our Upper School spring musical.

### CLASS VIII

This class works on diction and scene-study techniques. They present a Shakespeare play with boys from the Allen-Stevenson School in the fall. As an introduction to the Upper School, Class VIII students may participate in our Upper School spring musical.

## MUSIC

### ACADEMIC TRACKS

#### CLASSES V–VIII

Middle School students personalize their study of music by choosing to follow an academic music “track.” Through this system, each student can specialize in a musical instrument or skill while continuing to study the core curriculum and music literacy concepts that are essential to a robust and well-rounded music education. The three tracks available to Middle School musicians are composition, guitar, and strings, which are discussed in greater detail below. Because the curriculum is designed with a four-year approach, students continue in their designated track throughout Middle School. When special circumstances arise, students may consult with the music department head about transferring tracks.

### Composition

Composition students deepen their music composition, criticism, and theory skills by analyzing a wide array of music and creating their own. Students collaborate on a variety of original compositions throughout the year, with a particular focus on opera (Class V), popular song (Class VI), film music (Class VII), and musical theater (Class VIII).

### Guitar

Guitar students learn a flexible guitar technique that will prepare them to explore the many worlds of guitar music, from rock and pop to classical and jazz. They study basic chords, strumming and picking patterns, simple melodies, and reading guitar tablature. After acquiring the technical fundamentals, guitar students have the opportunity to choose much of the music studied in class and to play some of their favorite songs.

### Strings

String students learn the fundamental techniques of playing violin, viola, or cello in a small group setting. They develop technical facility on their chosen instrument while playing a variety of engaging repertoire and experimenting with improvisation. String students learn the fundamentals of ensemble playing and have frequent opportunities to write and perform original instrumental compositions.

### PERFORMING ENSEMBLES

#### CLASS V

In addition to following one of the tracks outlined above, every student in Class V sings in a grade-wide chorus, where she continues to hone singing and sight-reading skills in a dynamic choral setting that encourages vocal health, develops breath control, and builds ensemble skills. The Class V chorus performs in winter and spring concerts, as well as special assemblies and events throughout the school year.

**CLASSES VI–VIII**

Students in Classes VI–VIII may choose to participate in one of four optional performing ensembles, which will allow them to hone their performing and ensemble skills in specialized mixed-grade groups. All ensembles meet once a cycle in a dedicated academic period and again during one of the two Middle School clubs periods. Listed below are the performing ensembles available to students in Classes VI–VIII:

MS Chorus

MS Drumming Ensemble

MS String Ensemble

**CLASSES V–VIII****Private Music Instruction**

Additional instruction in voice, guitar, piano, violin, viola, and cello is available for an additional charge.

**DANCE****CLASSES V AND VI**

Students in Classes V and VI have one trimester of dance each year. The dance program is geared toward helping the students increase their understanding of compositional structures and qualities in relation to dance, as well as integrating music and other art forms in the creation of dance pieces. They also expand their use of technology to research and create dances.

**CLASSES VII AND VIII****Dance Track**

All Class VII and VIII students follow either a dance or PE track to fulfill their physical education requirement. The dance track is for students who are interested in studying dance technique at a more advanced level and going beyond the fundamentals of composition to explore their own choreography. Dance students collaborate throughout the year to create their own class and group dances, and have at least two opportunities to perform for their peers. All students in the dance track are members of the Middle School Dance Collective.

**PHYSICAL EDUCATION & ATHLETICS**

All Middle School athletic teams provide students at Nightingale the opportunity to compete, learn skills, grow, and have fun. All teams in Classes V–VIII have a no-cut policy, allowing students experience playing on a team for their school. Team sport choices mirror our Upper School athletic program and include soccer, volleyball, and cross country in the fall; basketball, winter track, and swimming in the winter; and lacrosse, softball, and track and field in the spring.

**CLASSES V AND VI**

Class V and VI students follow either a PE track or an athletic track to fulfill their physical education requirement. In the PE track, students are introduced to a variety of activities, including cooperative games, traditional team and individual sports, outdoor education, yoga, and resistance training. Students learn about components of fitness, cardiovascular endurance, muscular strength and endurance, and flexibility as a means to both educate and motivate the students to become active both inside and outside of the school.

The athletic track in Class V and VI is designed to be an introduction to school sports. The goals for the program are to achieve wide student participation and to develop sport-specific skills in a modified environment.

**CLASSES VII AND VIII**

All Class VII and VIII students follow either a dance, PE, or athletic track to fulfill their physical education requirement. The PE track focuses on promoting physical literacy through varied activities. Team sports and games promote skill development, teamwork, and strategic analysis, while providing opportunities for leadership and creativity. Students participate in a variety of cooperative games and traditional sports. Other fitness activities may include yoga, High Intensity Interval Training, Zumba, and bouldering. Students also learn how to interpret and use fitness assessment data to set goals and develop lifelong fitness plans. Through this multifaceted program, students gain knowledge, skills, and confidence to become and remain physically active for a lifetime.



The athletic track in Classes VII and VIII continues to build on sport-specific skills learned in Class V and VI, while introducing the use of strategy in sports. Students begin to learn that commitment to their given sport takes dedication and they are expected to attend all scheduled practices and competitions preparing them for competition at the varsity level.

## LIBRARY

### CLASSES V–VIII

The Middle School library program builds on the foundation developed in the Lower School. With a focus on collaboration, critical assessment of sources, citation methods, effective note taking, and the wise use of technology to access, synthesize, and present findings, the program's dual objectives are to develop the skills necessary to navigate an increasingly complex, information rich world and to foster a love of reading.

Every student in Class V takes library class for one semester and will expand upon the skills they learned in lower school. Students will learn about the middle and upper school library collections, learn how to access and effectively use databases, analyze resource credibility, and work on their media and digital literacy skills.

In addition, librarians collaborate with faculty to provide all Middle School students with challenging and rewarding research experiences that teach them how to solve information queries successfully by developing the skills necessary to define a research question, identify keywords and search terms, and locate and evaluate print and digital resources. The library maintains a strong online presence to support student learning beyond designated class times. Research pathfinders (LibGuides) provide in-school and remote access to the online catalog as well as an extensive range of databases and curated digital resources.

## COMMUNITY ENGAGEMENT

Community engagement in the Middle School seeks to offer opportunities for students to identify and respond to the needs within their communities both near and far. Middle School service projects vary widely, from visiting museums with adults suffering from Alzheimer's Disease to fundraising for an organization chosen by students. The projects focus on meeting the intellectual and emotional development of our students. Dedicated service days in the Middle School allow students to delve into the causes and consequences of social injustices such as hunger and homelessness. Elected representatives to the community engagement board in each grade help to organize projects for their classmates. As in the Lower and Upper Schools, classroom teachers may incorporate service-learning projects into their curriculum.

Nightingale has a partnership with the Manhattan Children's Center (MCC), a school for autistic and other special needs children on the Upper West Side. All Class V students receive hands-on training and then visit the center twice in small groups to spend time with children who learn and interact differently from themselves. They teach the students at MCC about socializing, friendship, and communication, while bringing joy to their new buddies. Empathy, compassion, respect, and innovation are just a few of the skills that our students develop during their time at MCC. They also engage in a curriculum to learn more about autism and to bring awareness to our community to help break down barriers in our communities.

Each member of Class VII participates in the Sweet Readers program at Nightingale once a week for six weeks during their advising period. Sweet Readers brings adults (elders) with Alzheimer's Disease together with Middle School students to explore and create poetry and art in museum galleries and elder care centers. The goal of the program is to discover the person behind the disease.

When direct, in-person service is not possible, our students will engage in virtual conversation with the elders through Sweet Readers and find ways to advocate for our community members together.

## TRIPS

All 2021-2022 trips are pending. Traditionally, full-class trips include:

Class V: Team-building excursion in NYC  
 Class VI: Day trips integrated into the curriculum  
 Class VII: Washington, DC (overnight): students advocate for issues important to them on Capitol Hill  
 Class VIII: Alabama (overnight): students spend a full day at the National Memorial for Peace and Justice and the Legacy Museum, meet with the Equal Justice Initiative and Civil Rights leaders, and visit other key sites of the Civil Rights Movement.

## EXTRACURRICULAR ACTIVITIES

The extracurricular program is primarily elective, allowing students to choose activities that interest them and to use their talents to the fullest extent in a variety of experiences. Participation in extracurricular activities allows students to build group spirit and expand their friendships.

Class VI puts on a fall musical with the Allen-Stevenson School; students can choose to perform on stage or work backstage. All the students in Class VII present a musical in March; they also have the opportunity to join with boys at Allen-Stevenson in their spring production. Class VIII students may audition for a Shakespeare play produced by the Allen-Stevenson Drama Department in the fall; they may also try out for the Upper School spring musical.

Other Middle School extracurricular offerings include the following:

- Athletic teams, Classes V–VIII
- *Out of Uniform* (MS literary magazine)
- Student government: Middle School co-presidents and class representatives to the Arts Board, Community Engagement Board, Environmental Board, CAFE/Inclusivity Board, and Athletic Board (Blue/Silver)
- Community service projects at each grade level
- Debate (tournament team and club)
- Sweet Readers, Class VII
- Performing Ensembles, Classes VI–VIII (see page 23)
- Current Events Club
- Two in-school club periods per cycle; Previous clubs offerings have included: Debate Club, Knitting Club, Math Club, Gender and Sexuality Alliance (GSA), Greco-Roman Club, Hip Hop Dance Club, Board Games Club, Drama Club, and DIY/Makers Club.

## ENRICHMENT

MS students have a daily Enrichment period that gives them time to pursue independent projects in art, music, and technology; to seek extra help in their academic subjects; and more.

Offerings include:

- Major Academic Subject Labs
- Open Art (Ceramics, Painting, Photography, Video)
- Open Maker Space
- Roof
- Open Gym
- Quiet and Group Study Labs
- Library

## THE THINKERY

MS students have the option to participate in The Thinkery on Mondays through Fridays from 3:20 until 6:00 p.m. Students may stay after school to study, think, connect, and play. Under the supervision of a Middle School faculty member, students will receive help with homework, studying, and organization to support their individual goals. Students can also complete work independently, play educational games in groups, or receive content-specific support from Upper School peer tutors or teachers who are available at that time. This program supplements our daily Enrichment time, when students are able to receive similar individualized support. Students who participate in Nightingale sports or have other after-school activities may join us anytime before 6:00 p.m.



# Upper School

The Upper School curriculum reflects our belief that a good liberal arts education adapted to the modern world is the best preparation for college and a lifetime of learning. Students establish solid foundations in English, mathematics, history, science, and at least one world language. Our wide selection of offerings enables students to pursue their interests and build on their strengths.

Upper School courses at Nightingale are designated as “majors” or “minors” based upon how often they meet within each eight-day cycle, as follows:

- Majors typically meet four or five times per cycle.
- Minors meet fewer than four times per cycle.

Students are expected to complete twenty major courses during their time in Upper School which typically amounts to five major courses each semester. In addition, certain minor courses are required for graduation (see “Required Minors” on the next page).

Exceptions to these graduation requirements may only be made at the discretion of the Head of Upper School and the Associate Head of School. Please see the Upper School handbook for further information.

Students may take five or six majors in Class IX and take five thereafter. Minor courses may not be combined to take the place of a major.

PLEASE NOTE: Within this Curriculum Guide, a coral “(m)” following the course name indicates that a specific course is a minor. All courses without that designation are majors.





## Honor Code

The Honor Code is based on two pillars: academic honesty and a commitment to demonstrating respect for others in our school community.

"I will not cheat, steal, or plagiarize. I will treat others with respect and dignity. I understand that I am encouraged to prevent violations of the Honor Code from going unnoticed."

Students at the Nightingale-Bamford School are expected to show respect for both personal and academic honesty and for one another. Trust is the foundation of a school community. A sense of honor is developed by living in an atmosphere of trust and by assuming the responsibilities that accompany this trust. Each student attending the Nightingale-Bamford School is expected to support the honor system.

## Diploma Requirements

ENGLISH	4 years
HISTORY	3 years, including 1 year of American history
MATHEMATICS	3 years
SCIENCE	3 years, 2 of which must be in a laboratory course
WORLD LANGUAGES	3 years in one language or 2 years in each of two languages
ARTS	1 year (visual and/or performing arts)
PHYSICAL EDUCATION	4 years
HEALTH AND WELLNESS	4 courses
SERVICE LEARNING	Individual sustained service both to the school and the broader community required for Classes X–XII
REQUIRED MINORS	Going Beyond Barriers* Class IX Programming Class X Arts and Digital Design Sequence**

\* This four-year sequence includes Class IX Agents of Change, Class X Leadership, Class XI Public Speaking, and Class XII Essential Questions of the Mind and Heart: A Capstone Course on Questions in Psychology, Philosophy, and Ethics

\*\* Class X students must choose two of the following semester-long courses: Engineering and Design, Music Appreciation, Introduction to Art History, and Dance History

## ENGLISH

## CLASS IX

**Class IX English**

Chimamanda Adichie's "The Danger of a Single Story" sets the theme for this required year-long course. In the fall semester, students read, discuss, and write about Jacqueline Woodson's *Another Brooklyn*, Gish Jen's *Typical American*, and several modern short stories. In the spring, students read Shakespeare's *Romeo and Juliet*, a sampler of sonnets from Shakespeare to the present, and Moisés Kaufman's *The Laramie Project*. Guided by a visiting writer in a play-writing workshop, students borrow Kaufman's investigative technique to craft and present The Verona Project, a collaborative theatrical engagement with *Romeo and Juliet*'s hometown. The year concludes with a reading of Ali Smith's *Girl Meets Boy*. Considerable time is devoted to expository writing, oral expression, and standard English grammar.

## CLASS X

**Class X English**

Class X explores texts of transformation. In the fall, those metamorphoses involve courtship and marriage: in Shakespeare's *Twelfth Night*, men and women pursue those who want nothing to do with them; in Ibsen's *A Doll's House*, Nora Helmer questions her union with a patriarchal husband; and in Hurston's *Their Eyes Were Watching God*, Janie Mae Crawford journeys toward selfhood through three marriages. In the spring, two texts straddle the border between memoir and fiction: Wiesel's *Night* and *Narrative of the Life of Frederick Douglass*. In a writing workshop, students read a variety of essays—analytical, argumentative, anecdotal—as models for their own writing. The year ends with a look at the remnants of the American Dream in two novels, Fitzgerald's *The Great Gatsby* and Mukherjee's *Jasmine*.

## CLASSES XI AND XII

All Class XI and XII students take their grade-level English course in the fall semester and an Advanced English course of their choosing in the spring semester.

## CLASS XI

**Junior English**

This required semester-long course is an immersive writing workshop, in which preconceptions about strong writing are challenged and the bounds of the essay genre are expanded to embrace expository writing, creative nonfiction, memoir, and the personal essay. Students read a wide range of essays as models for their writing, from canonical masters to

contemporary writers published in *The New Yorker*. Essayists typically include Virginia Woolf, James Baldwin, Joan Didion, Martin Luther King, Jr., Bruno Bettelheim, Barbara Kingsolver, and David Foster Wallace. Students not only expand their repertoires as writers; they also learn to view writing as an active form of thinking and a principal tool of intellectual exchange. In the process, they move beyond set models to arrive more organically at meaningful organization. The last few weeks of the term are devoted to mid-twentieth-century American poets, including Elizabeth Bishop, Sylvia Plath, and Robert Lowell.

## CLASS XII

**Senior English**

This required semester-long course ranges across literary genres to explore unmet needs, dismantled stereotypes, and evolving gender roles in the twenty-first century. Current readings include Claudia Rankine's hybrid-genre lyric *Citizen*, William Faulkner's modernist novel

*As I Lay Dying*, a sampler of Emily Dickinson's poetry, and two recent Pulitzer Prize winners: Lynn Nottage's play *Sweat* (2017) and Tracy K. Smith's poetry collection *Life on Mars* (2011). Thanks to Nightingale's Drama Grant, students often attend and write reviews of a Broadway or off-Broadway play. Other writing assignments include the analytical and the creative. Each student presents a final interdisciplinary project that explores thematic connections between a Dickinson poem and one other literary work from the term.

## SPRING SEMESTER OFFERINGS

## CLASSES XI AND XII

**Advanced English: The Bible as Literature**

This course is designed for all students—whether Bot Mitzvahs or confirmands, atheists or agnostics—who want to know more about this cornerstone of Western literature and civilization. The number-one bestseller of all time, the Bible is first of all an anthology of ancient literature, so we will read passages in their historical context. We will explore the Good Book's great literary diversity: from myth to history, prophecy to poetry, epistles to eyewitness accounts. In addition to analytical writing, students will craft their own creation myths, psalms, gospel accounts, or letters to the faithful. They also will consider some of the ways that artists have depicted biblical stories over the centuries. Finally, each student will select one biblical painting in the Metropolitan Museum of Art for an interdisciplinary project.



## CLASSES XI AND XII

### **Advanced English: Environmental Literature**

This course will explore representations of the natural world in non-fiction and poetry, from the Romantic tradition to contemporary ecology. Seminal essays by Annie Dillard, John Muir, Robert Macfarlane, Aldo Leopold, and Rebecca Solnit will complement poems by William Wordsworth, John Clare, Gerard Manley Hopkins, Mary Oliver, Joy Harjo, and Alice Oswald. We will reflect on the role of imagination and craft in nature writing, the uses of nature as literary device (anthropomorphism, pathetic fallacy, etc.), and the metaphorical relationship between humanity and the natural world. We also will contemplate the scientific disciplines that have long-inspired writers (astronomy and cartography among them), the intersection of nature and the sacred, the current global eco-poetic movement, and questions about sustainability. Assignments will include textual analyses as well as creative responses to nature and place.

## CLASSES XI AND XII

### **Advanced English: From Page to Screen**

Calling all bibliophiles and cinephiles! In this era of hybrid learning and intersectionality, here is the course mash-up that may best befit the time: great books and the movies they spawned. In this course, we will compare compelling literary works with their movie adaptations—and go beyond “the book was better than the film.” (Because it always is.) Along the way, we will take a brief but necessary detour into the world of screenwriting to better acquaint you with three-act structure and to prepare you for film analysis. Possible books and films include *If Beale Street Could Talk*, *Little Women*, *Emma* (*Clueless*), *Fight Club*, *L.A. Confidential*, *The Devil in a Blue Dress*, and *The Maltese Falcon*.

## CLASSES XI AND XII

### **Advanced English: Outlaws and Outliers Transgressing Sexuality and Gender in Modern Literature**

How have diverse gender and sexual identities been depicted in literature over the last hundred years? What can we deduce about our current culture or where we might be headed based on the most recent work of LGBTQ+ writers? In this course, we will read short stories, novels, memoirs, essays, and poems, examining how genre works on content and drawing conclusions about the effects of different forms. Readings may include Toni Morrison’s *Sula*, Willa Cather’s *Paul’s Case*, Vladimir Nabokov’s *Lolita*, Taylor

Mac’s *Hir*, and Ocean Vuong’s *On Earth We’re Briefly Gorgeous*. Students will gain a greater appreciation for the variety of “transgressive” stories writers are telling and an opportunity to tell parts of their own stories centered on gender and/or sexual identity, in a genre of their own choosing.

## CLASSES XI AND XII

### **Advanced English: The Stories of Our Lives**

In recent years, writers have been reaching for a new kind of literary memoir—sometimes termed a “meta-memoir”—to write about the particular details of their lives and the process of writing itself. The result is work that is both personal and political, narratives that experiment with different ways of storytelling and interrogate how and why we tell the stories we do. In this course we’ll look at four memoirs from the last decade that have pushed the boundaries of traditional genres: they might include Jesmyn Ward’s *Men We Reaped*, Molly Brodak’s *Bandit*, Cathy Park Hong’s *Minor Feelings*, Carmen Maria Machado’s *In the Dream House*. We’ll discuss the craft of these texts and the relationship between form and content. In turn, students will try out techniques they’ve studied, as well as invent their own narrative structures, to support the stories they want to tell.

## CLASSES XI AND XII

### **Advanced English: Systems of Change**

How are writers today—novelists, essayists, poets and journalists—shedding light on social inequities in this country in order to create change? Potential areas of focus in this multidisciplinary course include housing, education, wealth inequality, climate change, and criminal justice. We will read across genres to investigate how these systems have operated historically and in the present day, and we’ll learn what more imaginative and equitable solutions might look like, particularly for Black Americans and people of color more broadly. Writers may include journalists Paul Tough and Nikole Hannah-Jones, sociologists Michelle Alexander and Matthew Desmond, novelists Tayari Jones and Margaret Wilkerson Sexton, and poets Reginald Dwayne Betts and Javier Zamora.

## HISTORY

## CLASS IX

**Early Modern World History**

From the fourteenth through the mid-eighteenth centuries, the world was transformed by state-building, religious and cultural conflict, trade, innovation, and increased interconnection. In this course, students explore these transformations as well as the persistence of older forms of human society. In addition to a textbook, students read and analyze primary sources from Asia, Africa, Europe, and the Americas. Particular attention is paid to developing students' analytical writing, critical reading, discussion, and research skills.

## CLASS X

**Modern World History**

Many of today's most controversial issues, such as the state of Africa, the crisis in the Middle East, and America's rise to superpower status, have their origins in topics we discuss in Class X history. We begin the year by examining the Enlightenment, the Atlantic and Industrial Revolutions, and the emergence of a distinctly modern society in Western Europe. We then explore the growing capacity of these modern societies to exert influence and control over the rest of humankind through empire or less formal means like diplomatic pressure, economic exploitation, or missionary activity. The course culminates in an investigation of twentieth-century totalitarian regimes, the global impact of the two world wars, and decolonization and globalization in the contemporary world. Students analyze primary sources on a daily basis and continue to develop their essay-writing and research skills.

## CLASSES XI AND XII

**United States History**

United States history introduces students to major issues and themes from European settlement through the end of the Cold War. Special emphasis is given to the development of political institutions and traditions, interactions between people with competing interests, the shaping of American identity, and the role of the historian in how we view the past. To accomplish this, we rely heavily on primary sources, incorporate social and cultural history, and consider historiographic changes in interpretation. Students will learn advanced research methods by completing a year-long project requiring archival research at the New-York Historical Society.

## ELECTIVE OFFERINGS

Additional requirements will be expected for those students wishing to take any of the major courses below at the Advanced level. These requirements may include additional readings and assessments, as well as a significant project.

## CLASSES XI AND XII

**World Now**

The World Now is an in-depth examination of the boldest and most provocative issues in the world today. We start with the COVID-19 Pandemic and thoroughly discuss how it has affected all aspects of our world now, from the economic effects to the George Floyd Protests, from the transformed nature of work to the political effects, from the cultural effects of social distancing and remote learning, to the arrival of a vaccine. We then study the development of our global, transnational culture, one predicated on climate change and post-truth, but also constructed through the shared assumptions of social media, delivered on smartphones. Herein we discuss such new developments as conspiracy theories, cancel culture, and surveillance capitalism. The Syrian Civil War has proved the largest historical catalyst of our time, sparking an international migrant-refugee crisis that has swung political sensibilities to the far right throughout Europe. The fear of immigrants is a core value of our age of xenophobia, informing Brexit and the election of Donald Trump in equal measure. The nation-state might easily be construed as an obsolete concept on Planet Facebook, but states continue to conduct ethnic-cleaning campaigns against those defined as out-group. We will also examine our own nation's evolving role, the ways in which it has conformed with international political and social trends but has also operated as an outlier, focusing on issues such as mass incarceration and opiate addiction, gun ownership and reproductive rights. Our class will be conducted in round-table format, with instructor and students discussing and arguing, all in search of a crisper understanding of our world now and our place in it.

*This course is offered in the fall.*

## CLASSES XI AND XII

**History, Gender, and Power**

Less than a decade ago, many scholars thought women's history had become passé, eclipsed by the study of gender and sexuality. However, recent developments such as the Women's March and its

dissolution, the #metoo movement, and increased media attention to how gender discrimination interacts with other kinds of inequality have made clear the need for education and research that centers on women, albeit in an expanded field of inquiry. Why has gender inequality been so persistent in history? What accounts for feminism's successes and failures? How does the past resonate in contemporary struggles of women, LGBTQ, and non-gender-conforming people? In exploring these and related questions, this class takes a thematic approach to the history of women, gender and sexuality, drawing on case studies that range from the Hebrew Bible to 17th century ideas about female bodies to the national liberation movement in twentieth-century Kenya to bell hooks's critiques of Second Wave feminists. Through this course, students will develop an understanding of the persistence of gender inequality in wide-ranging historical contexts; intersectionality; varieties of feminism; women and work; the development of modern ideas about sexuality, gender, and identity; and the legacies of twentieth-century movements for justice and equality. *This course is offered in the fall.*

#### CLASSES XI AND XII

##### **Modern Latin American History and Literature**

In the course of the 20th century, seven Latin American authors have won the Nobel Prize: Gabriela Mistral (1945); Miguel Ángel Asturias (1967); Pablo Neruda (1971); Gabriel García Márquez (1982); Octavio Paz (1990); Rigoberta Menchú (Peace Prize, 1992); Mario Vargas Llosa (2010). Together, they give us a chance to consider some of the major literary and political movements in Latin America leading to the present. This course offers an interdisciplinary overview of society and culture in Latin America. Topics include the legacies of conquest, patterns of economic development, changing roles of women, expressions of popular culture, cycles of political change, and U.S.-Latin American relations. Students will become familiar with political, economic, social, and cultural conditions that have produced conflict, change, and continuity in Latin America over the last 200 years. A focus will be placed on the literature from the time and place of each region covered in the course. This course is offered in English. *This course is offered in the spring.*

#### CLASSES XI AND XII

##### **Economics Now**

Economics Now is a general introduction to the study and practice of economics and its broad connections to our contemporary world. We discuss the basic principles of the discipline, what economists do, and how they measure and assess the economy before turning to such issues as behavioral economics and surveillance capitalism. We then explore the theories of John Maynard Keynes, the father of modern economics, in a unit on economic policy, where we investigate the workings of monetary and fiscal policy and how our government confronts such issues as unemployment, taxation and the budget. In a unit on the financial system, we discuss the stock market and other financial institutions, focusing on the Financial Crisis of 2008 and the government's response to it. In a two-part unit on the American Economy now, we then examine the roots of economic inequality in our nation today, focusing on such issues as social class and social mobility, the economics of college, the minimum wage, and maternity leave. Special attention will be given to the economic effects of the COVID-19 Pandemic.

*This course is offered in the spring.*

#### MINOR OFFERINGS

#### CLASSES X-XII

##### **Indigenous Peoples' History (m)**

Due to the critical importance of understanding Indigenous Peoples' history, this course will offer an overview including the arrival of the Europeans in the 1600s, the westward expansion, the period of the Indian Wars in the late 19th century, the activist movements in the 60s and 70s, through to the present including the supreme court cases regarding Indigenous Peoples' rights such as Sharp v. Murphy whose outcome will be decided at the end of 2020 and United States v. Sioux Nation of Indians, in which the Lakota people rejected a \$17.1 million dollar payment for the seizure of the Black Hills. Students will have the unique opportunity to speak with members of the Lakota tribe and students at the Pine Ridge Girls School, Nightingale's sister school, to learn about their life experiences and what they want the students at Nightingale to understand about their history and their lives on the Pine Ridge Reservation. Field trips will hopefully include visits to the National Museum of the American Indian as well as the American Museum of Natural History to gain perspective on the portrayal of Indigenous Peoples' in the US. The course will culminate in a research paper and presentation. *This course is offered in the fall.*

**CLASSES X–XII****The Holocaust and Human Behavior;  
Facing History and Ourselves (m)**

Drawing upon on the ground-breaking course, Holocaust and Human behavior from Facing History and Ourselves, students will explore the essential question: *What does learning about the choices people made during the rise of the Nazi Party, and the Holocaust teach us about the power and impact of our choices today?*

In this course, we will examine the period in the twentieth century when Nazi Germany murdered six million Jews and millions of other civilians, in the midst of the most destructive war in human history. We will do a deep dive into a case study of the Weimar Republic and the Nazi Party's rise to power in Germany. Through primary sources, survivor interviews, film and other sources, we will bear witness to the human suffering of the Holocaust and examine the range of responses from individuals and nations to the mass murder of the Nazi regime, as well as the aftermath of these atrocities. In examining this history, we will weigh questions like how to achieve justice and reconciliation, and how painful histories should be remembered. We will also critically examine the rise in the United States of anti-semitism, hate speech and white nationalism, and consider the ways in which the rise of Nazi Germany and the history of the period educates us about our responsibilities in the world today.

*This course is offered in the spring.*

**MATHEMATICS**

The Upper School math program serves each individual student by having various levels of study for each class ranging from on-level to accelerated and honors levels. Although the majority of students will take each course with members of their own class, we are able to tailor our curriculum so that talented and passionate students can move through the course of studies according to their abilities.

**CLASS IX****Geometry**

This course approaches geometry from Euclidean, coordinate, and transformational perspectives. Inductive and deductive reasoning, as well as the development of formal proofs, are taught throughout the year. Topics studied include properties of polygons and circles, similarity and congruence, constructions, geometric probability, areas of plane figures, and surface areas and volumes of solids. Algebraic skills are reinforced and enhanced in the

context of geometric investigations. *The Geometer's Sketchpad* and *Geogebra* are used as illustrative tools.

**CLASS X****Algebra II**

Linear equations and inequalities are reviewed prior to a thorough study of systems of equations and inequalities. Students are introduced to matrices as tools in the solution of systems. Work with quadratic functions is extended to polynomial functions of higher degree, and students are introduced to exponential and logarithmic functions. Students also work with radical and rational functions. Additional topics may include probability and conic sections.

**CLASS XI****Precalculus**

This course is designed to prepare the student for college-level calculus. Polynomial, rational, exponential, logarithmic, and trigonometric functions are analyzed in depth. Extensive use of graphing calculators assists in analyzing translations and scale changes, as well as application of these functions. The course may conclude with a study of sequences and series and/or an intuitive approach to limits and continuity.

**CLASS XII****Calculus**

This course covers the concepts, techniques, and applications of differential and integral calculus. Students start with a comprehensive look at functions, limits, and continuity. From there the concept of the derivative is developed, and derivative rules are established for many types of functions and their inverses: polynomial, rational, trigonometric, logarithmic, and exponential. The Fundamental Theorem of Calculus bridges the derivative to the integral, and the use of integration in area, volume, and summation problems is practiced.

**CLASS XII****Advanced Calculus (B Level)**

*Departmental permission required*

This course begins with a swift review of functions, limits, and continuity. Students study differential calculus in depth, beginning with the definition of the derivative and differentiation rules and continuing with applications such as optimization and related rates problems. Through discussion of the Riemann Sum and the anti-derivative, the integral is introduced. The second semester focuses on applications of the Fundamental Theorem of Calculus, techniques of integration, areas between curves, and volumes of solids of revolution.

**CLASS XII****Advanced Calculus (A Level)***Departmental permission required*

This course begins with the topics in differential and integral calculus covered in Advanced Calculus (B Level). Additional topics investigated include polar coordinates, vector functions, parametrically defined curves, logistic curves, sequences and series, integration by parts and partial fractions, and elementary differential equations.

**CLASSES X–XII****Statistics in the Era of Big Data**

Statistics in the Era of Big Data is a year-long course that introduces students to major themes of exploratory analysis of data, planning and conducting a study, variable distributions, statistical inference, and mapping data. They will examine both sampling and experimentation as methods of collecting data. Finally, they will learn how to select and defend a reasonable model for data. Students will make extensive use of technology as a tool for helping to investigate, interpret, and describe large sets of data. This year-long course is about the nuance in numbers, an idea less explored in most math courses.

**CLASSES XI–XII****Advanced Linear Algebra: Vectors and Modeling**

Linear Algebra is the study of linear systems of equations, vector spaces and linear transformations. It plays an important role in many areas of mathematics, statistics, engineering, the natural sciences, and the computer sciences. In this class, fundamental notions such as vector, vector space, subspace, basis, dimension and linear transformation will be introduced and developed alongside applications drawn from computer graphics, signals, dynamical systems and statistics.

**CLASSES XI AND XII****Math for Social Action (m)**

This semester-long course introduces and utilizes mathematical tools within statistics, data and regression analyses, and probability to explore injustice and inequities in American life. Through an inquiry-based approach, students investigate systems and structures of injustice; analyze the patterns and cycles that perpetuate inequities in political representation, housing, healthcare, and education; and identify the possible mathematical entry points to interrupt systemic injustice.

*This course is offered in the spring.*

**INTERSCHOOL MATH COURSES**

Nightingale is a member of Interschool, a consortium that also includes Brearley, Browning, Chapin, Collegiate, Dalton, Spence, and Trinity. It offers courses and programs that change from year to year depending on student interest. All Interschool courses require school permission.

**CLASSES X–XII****Number Theory (m)**

Carl Friedrich Gauss once called number theory the “queen of mathematics” because of its fundamental place in the study of mathematics. The study of number theory allows us to dive deep into the foundations of mathematics to understand the integers, their properties, and the application of these ideas to other areas of mathematics. While exploring the integers, students use and develop skills at algebra and at proof-writing. Topics include, for example, the infinity of primes, the Fundamental Theorem of Arithmetic, the Euclidean algorithm, the Greek notion of incommensurable lengths, alternate number systems and their properties, repeating decimals and their connection to infinite series, modular arithmetic, and notions of infinity that arise from counting the integers.

**CLASSES X–XII****Game Theory (m)**

A mathematical analysis of conflict and cooperation that attempts to predict, explain or recommend courses of action in situations where one player's success depends on the decisions of all players. A full year program where theoretical analysis is taught through applications in economics, politics, business, evolutionary biology, religion, philosophy, computer science, and sports, as well as through games such as poker and chess.

**CLASSES X–XII****Collaborative Problem Solving (m)**

This course is designed for exceptional math students who are interested in further mathematical challenges and are looking to connect with enthusiastic and very capable math students from schools other than their own. The class is informal and fun, but it presumes a strong background in creative mathematical problem solving. One could acquire this background through familiarity with challenging math contests or from having participated in unusually challenging classes at school. Topics covered include number theory, combinatorics and probability, advanced geometry,



and inequalities. Students who are at a level where they might reasonably hope to qualify for AIME would be well suited to the class. The class is a great opportunity for talented math students to deepen their understanding of advanced problem-solving methods, to further develop their ability to think creatively in a mathematical context, and to get to know other like-minded students.

## SCIENCE

As the core scientific disciplines, biology, chemistry, and physics are all year-long, lab-based courses that develop a broad foundation of essential knowledge and skills.

### CLASS IX

#### Biology

Biology is the study of all forms of life and involves an understanding of increasing levels of biological organization from organic molecules and cells to organisms and ecosystems. Major themes applied in this course include the relationship between structure and function, energy transfer, continuity and change, and interdependence in nature. Specific topics studied include cellular energetics, genetics, evolution, animal physiology, and ecology. The laboratory component reinforces major concepts and builds skills, and the inclusion of current events encourages students to apply the discipline to their everyday lives.

### CLASSES X AND XI

#### Chemistry

*Prerequisite: One lab science  
(Biology recommended)*

The principles of atomic structure, matter-energy relationships, stoichiometry and the mole concept, heat, bonding, solution chemistry, and equilibrium are among the topics studied in this course. Students develop an ability to view matter from multiple perspectives. Laboratory skills, problem solving, and independent analysis are emphasized throughout the year. Successful completion of chemistry is expected for enrollment in all Advanced science courses.

### CLASSES XI AND XII

#### Physics

Physics is a non-calculus first-year physics course open to all students who have successfully completed at least one lab science. Physics and its applications are ubiquitous in our daily lives. We explore those connections by studying a broad range of topics and phenomena including linear motion, non-linear motion, forces, momentum, energy, electricity,

magnetism and light. Physics stresses conceptual understanding and problem solving, while making meaningful connections with mathematics and other branches of science. Experiential learning is central to the exploration of physics and this is done through myriad hands-on laboratory activities supplemented by digital simulations.

### ADVANCED COURSES

*After successful completion of the introductory course in a given discipline, motivated and interested students in classes XI-XII are able to continue their studies in an advanced level course. Advanced science courses involve more in-depth study, increased independent learning, and often a quicker pace to the learning process. Class XI students must enroll in physics to enroll concurrently in an advanced course in biology or chemistry.*

### CLASSES XI AND XII

#### Advanced Biology: Genetics of Cancer

*Prerequisite: Biology and Chemistry*

This semester-long, lab-based course investigates the central dogma of molecular biology and explores how mutation and erroneous cell signaling cause it to go awry in cancerous cells. Using the historical case study of Henrietta Lacks as a starting point, students will uncover mechanisms of carcinogen action, investigate microscopic techniques like karyotyping, and debate bioethical issues around modern cancer research. The course will culminate with a review of new targeted therapies for the treatment of cancer and their molecular mechanisms of function.

*This course is offered in the fall.*

### CLASSES XI AND XII

#### Advanced Biology: Biochemistry

*Prerequisites: Biology and Chemistry*

This semester-long course is an introduction to the study of biochemistry, focusing on the chemistry relevant to animal physiology and the link between biochemical processes and metabolic diseases and disorders. In short, students will develop an understanding of how biochemical processes work by uncovering what happens when they don't work properly. The semester begins with a review of macromolecules, chemical functional groups, and the chemical structure and properties of water. Then, organic chemistry and the significance of the carbon atom will be studied, leading up to an emphasis on biochemical reactions and metabolic pathways regulated by enzymatic catalysts. The course will be lab intensive with an emphasis on college-level lab methodology and skills.

*This course is offered in the spring.*

**CLASSES XI AND XII****Advanced Chemistry: Organic Chemistry***Prerequisite: Chemistry*

Organic Chemistry is the study of compounds containing carbon. This semester-long lab-based course covers the structure, bonding, and stereochemistry of these compounds, together with an emphasis on functional group characteristics, structure determination by spectrometric methods, reaction mechanisms, and synthesis.

*This course is offered in the fall.***CLASSES XI AND XII****Advanced Chemistry: Analytical Chemistry***Prerequisite: Chemistry*

Analytical chemistry is the branch of chemistry dealing with measurement, both qualitative and quantitative. This semester-long lab-based course focuses on applications of instrumental chemical analysis techniques for environmental monitoring, forensics, and food science. Field sites in Central Park and the East River Field are used to compare data with our own aquaponics system. Crime scene scenarios are staged for investigation. Food is prepared for analysis—and perhaps some tasting. The course is project based, and activities include planning of field work, sampling activity, sample preparation chemical analysis, interpretations of results and reporting.

*This course is offered in the spring.***CLASS XII****Advanced Physics: Modern Physics***Prerequisite: Physics*

If you have ever wondered what it would be like to travel at light speed, or how Schrodinger's cat can be both alive and dead at the same time, or what the equation  $E = mc^2$  is all about then this is the place for you. This semester-long course is an exploration of key discoveries leading to the development of modern physics. It will include topics that are not studied in the Physics course, such as atomic structure, the wave-particle duality of light (and everything), quantum mechanics, nuclear physics, special relativity, and general relativity. The focus is far more theoretical in this course than the first physics offering, but there will be some experiential learning with opportunities to examine how modern physics concepts intersect with other subject areas such as statistics, medicine, geology, astronomy, and engineering. The student experience in modern physics will be a deeper dive into more complex and theoretical concepts than the first-year physics courses offer.

*This course is offered in the fall.***CLASS XII****Advanced Physics: Topics in Physics with Calculus***Prerequisite: Physics \***Students must also be enrolled in Calculus*

This semester-long course explores topics in physics applying vector multiplication and calculus concepts such as limits, differentiation, optimization, integration, and more. Offered in the second semester, Topics in Physics with Calculus builds upon physics concepts learned previously, and it goes beyond the treatment of linear motion that occurs in all levels of calculus. This course provides students who may be considering a major in physics or engineering an opportunity to gain exposure to select topics in first semester classical mechanics including optimization of projectile range, the messy motion of objects encountering drag, rocket propulsion and an introduction to rotational mechanics and rotational inertia. The student experience in this course will be one in greater depth in its study of several topics with connections intentionally made between calculus and its applications in physics.

*This course is offered in the spring.*

*\*With departmental approval, a student may take this course concurrently with Physics.*

**ELECTIVE OFFERINGS****CLASSES XI-XII****Applied Sciences: Engineering***Prerequisites: Biology, Chemistry, and Physics (can be enrolled concurrently)*

This hands-on, project-based class will explore applications of the core science disciplines of biology, chemistry, and physics via the lens of engineering. The engineering themes of iterative design, optimization with constraints, effective communication, and collaboration will be emphasized in each module. Because the class is interdisciplinary, each module will focus on a project that combines multiple science disciplines, and focuses on their intersectionality. In one module students will design and optimize cookie recipes combining their understanding of heat transfer, gel mechanics, protein chemistry and physics, chemical and physical reactions and the biology of taste perception and digestion. In another module students will build their own speakers combining the principles of the physics of sound waves and electromagnets, and the biology and neuroscience of hearing. In a final module combining chemistry, physics and electrical engineering, collaboration will be the focus, and students will build environmental sensors to be used in crowd sources science projects

such as Citizen Science, or in a collaboration with an environmental engineering lab at NYU.

*This course is offered in the fall.*

#### CLASSES X–XII

##### **Biotechnology**

*Prerequisites: Biology and Chemistry;  
required for ISRP students*

This intensive laboratory class prepares students for internships in research labs. Students will learn important techniques in molecular biology including gel electrophoresis, restriction enzyme digests, primer design, DNA amplification by polymerase chain reaction (PCR), nucleic acid extraction and purification, genetic engineering, bacterial/yeast transformations, DNA sequencing, protein isolation, protein purification and visualization, enzyme linked immunoassays (ELISA), and chromatography. In the process, skills of trouble-shooting, data analysis and effective scientific communication will be emphasized. Students will also learn about the historical development as well as ethical considerations and societal impacts of biotechnology. As a capstone, students will design and conduct an experiment to determine whether food products have been genetically modified.

*This course is offered in the spring.*

#### CLASSES XI–XII

##### **Psychology: Biological and Behavioral Approaches**

*Pre-requisite: Biology*

In this semester-long class students will gain an introduction to psychology from the biological and behavioral perspectives. They will begin by learning about psychology as a discipline, the different approaches you can take towards it, and experimentation methods. Students will then study basic neurobiology/neuroanatomy followed by a focus on sensation and perception. They will then move to a more behavioral approach, studying learning and memory, motivation and emotion, personality, and social psychology. Students will participate in regular online and classroom discussions on pertinent psychological topics and will develop scientific research and writing skills while exploring psychological topics of their own interest.

*This course is offered in the fall.*

#### CLASSES X–XII

##### **Public Health: Survey**

*Prerequisite: Biology*

This semester-long course begins by introducing students to a brief history of public health starting with its emergence around the turn of the twentieth century, when infectious disease epidemics plagued London and New York City as the world's

emerging population centers. A survey of the major subdisciplines of public health then follows, including methods of epidemiology, fundamental biostatistical analyses, and the spread and control of both communicable and non-communicable diseases. The future of public health is also considered, particularly as climate change continues to affect the global distribution of pathogens and of the humans that serve as their hosts.

*This course is offered in the fall.*

#### CLASSES X–XII

##### **Public Health: Special Topics**

*Prerequisite: Biology; Public Health:*

*Survey is encouraged, but not required*

This semester-long course will take a deep dive into social and behavioral factors of health in an attempt to answer the question: do people choose their own health? Topics addressed include: an examination of the leading causes of death and their underlying behavioral influences, violence from a public health lens, a review of interventions and behavior modification models, and an analysis of how socioeconomic status and demographic variables (race/ethnicity, zip code, immigration status) can be used to predict health outcomes. Students will employ case studies and biostatistics from a national and global lens.

*This course is offered in the spring.*

#### CLASSES X–XII

##### **Astronomy: The Night Sky (m)**

What's your sign? You might be a Taurus, a Leo or a Pisces, but not an Ursa or Orion. Why not? The night sky has inspired us to look for patterns and seek the meaning in them culturally, mythologically, and both scientifically and non-scientifically from the dawn of civilization if not earlier. This semester-long course is an exploration of the celestial sphere, Earthly cycles, lunar and planetary motion, gravitation and light. The early history of astronomy and the discoveries that helped us to find our place in the solar system and cosmos are the focus. Students will complete a project on time keeping and lunar calendars, and there will be some mathematical problem solving involving the scale of our cosmic neighborhood, measurements of space, time and periodicity.

*This course is offered in the fall. It can be taken alone or in conjunction with the spring course.*

#### CLASSES X–XII

##### **Astronomy: Cosmology (m)**

Are we alone? How and when did the universe begin? Will the Sun eventually burn itself out? The notions of the universe being infinite and permanent are

debunked thanks to luminaries like Leavitt, Shapley and Hubble to name a few. This semester-long course begins at the center of the Sun and travels at the speed of light as we race far beyond our solar system. The key discoveries in modern astronomy that have helped us understand the structure of our galaxy, our place in it, and in the universe are the focus. Students will learn how astronomers have determined the properties of ever distant stars despite each one of them looking like mere specks of light, they will explore the fabric of spacetime, and address some of the existential questions that astronomers and lay people ask themselves.

*This course is offered in the spring. It can be taken alone or after the fall course.*

#### CLASSES X-XII

##### **A Sustainable World (m)**

Have you ever wondered just how much of an impact you and your household are having on the world? Do you struggle with making meaningful, long-lasting changes that are not overly costly or challenging to maintain? In this course, we will examine how sustainability must involve not only the protection and preservation of Earth and its natural resources, but also the health and prosperity of the people living there. This project-based class will allow us to explore a plethora of means by which individuals, communities, and organizations can work to lower their carbon footprint and lessen their negative effects on our natural world while not merely surviving, but actually thriving.

*This course is offered in the spring.*

#### CLASSES X-XII

##### **Science Seminar (m)**

In this year-long course, students develop advanced scientific literacy and communication skills. Students present talks on an area previously researched in a lab or field setting or on a current topic of interest from a scientific lens. Students also hear from outside speakers and attend educational programs at local universities and research institutions. In addition, students are guided and supported through the process of securing a science internship. This class meets once per eight-day cycle and is graded on a high pass/pass/fail basis. Science Seminar does not fulfill the science requirement and instructor approval is required to enroll. Students accepted into the Independent Science Research Program are required to enroll in the course.

## CLASSICS

Latin teaching in the Upper School has two separate tracks: one for students without prior knowledge of Latin and one for students who began their study of Latin in Middle School. Within both tracks, students work on acquiring proficiency in Latin vocabulary and grammar, as well as study Roman history and civilization, so as to be able to interpret and analyze seminal works of poetry and prose within the social, political, cultural, and literary context in which these works were created.

#### CLASS IX

##### **Elementary Latin**

Through the reading method, this course will introduce students to the fundamentals of Latin morphology and syntax, and will build their vocabulary in preparation for reading authentic Latin texts. Emphasis will be placed on the etymological relationships between English or the Romance languages and Latin. Lessons on Roman history and culture will also form an important component of the course.

#### CLASSES IX AND X

##### **Intermediate Latin**

The course is a continuation of Beginning Latin and will introduce students to more advanced concepts of morphology and syntax. Vocabulary acquisition and retention will be a main objective of the course in order to facilitate the transition from textbook Latin to authentic literary texts. In the spring term, the class will read excerpts from such authors as Catullus and Ovid, and will study these texts within the socio-political and literary context of the Late Republic and Early Empire.

#### CLASS IX

##### **Latin 2**

This course will begin with a review of basic grammar before the introduction of new advanced morphological and syntactical concepts. Continuous reading will be emphasized in preparation for authentic Latin literature. In the spring term, the class will study selections from poetry (Catullus and Ovid). Discussion of historical and cultural background and analysis of literary figures and meter will supplement the readings.

**CLASSES X AND XI****Latin 3**

This course will provide an overview of Latin literature and will study selections from prose (Cicero and Caesar) and poetry (Ovid). Students will work toward grammatical and lexical mastery and will build their reading skills. A considerable amount of time will be devoted to literary analysis and to grammar review in preparation for the following year's Latin Epic course.

**CLASSES XI AND XII****Advanced Latin: Latin Lyric or Latin Epic**

*Latin Lyric and Latin Epic are offered in alternate years.*

*Latin Lyric will be the Advanced Latin course offered in the 2021-2022 school year.*

**Latin Lyric**

Students will study and analyze works of Roman lyric poets with an emphasis on Catullus and Horace under various lenses, such as the cultural and socio-political context in which these poems were created, their generic characteristics, and their intertextual relationships. Close attention will be paid to morphological and syntactical phenomena, and rhetorical, poetic, and metrical figures. More in-depth textual analysis will be enhanced by the study of materials from recent scholarship. In addition to the assigned readings, students will practice translating different prose and poetry authors at sight and will prepare lyric poems of their own choice to present in class.

**Latin Epic**

This course is devoted to the study of Latin epic poetry with a focus on the most illustrious representative of the genre, Vergil's Aeneid. Readings will also include the Aeneid's literary heritage (Ennius's *Annales*) and legacy (Lucan's *Pharsalia*, Silius Italicus's *Punica*, and Statius's *Thebaid*). The class will examine the conventions and techniques of the genre and trace the development of the epic hero from its Republican beginnings onward. Lastly, Latin Epic will study how authors manipulated the epic genre and examine to what extent their works were used as a tool of imperial propaganda.

**CLASSES X-XII****Ancient Greek 1.1 (m)**

This semester-long course introduces students to the foundational building blocks of Ancient Greek: the alphabet along with some basic vocabulary and grammar. The course will consist of readings and exercises that aim to help students learn the language

of Homer, Sappho, Sophocles, and Plato. Cultural, historical, and linguistic themes will also form an important part of this course. The course is taught in English and does not presuppose any knowledge of Ancient Greek.

*This course is offered in the fall.*

**CLASSES X-XII****Ancient Greek 1.2 (m)**

*Prerequisite: Elementary Ancient Greek I or the equivalent*

This spring semester course is a continuation of Elementary Greek I. Students will expand their knowledge of the language through readings and exercises, focusing on grammar and enriching their Greek vocabulary. In addition, they will translate excerpts from texts in the original Greek and continue to engage with themes central to the history and culture of the Ancient Greeks.

*This course is offered in the spring.*

**CLASSES XI-XII****Ancient Greek 3.1 (m)**

*Prerequisite: with permission from the Classics Department*

This semester-long course will focus on Greek prose. Students will continue to develop their linguistic skills and their understanding of Ancient Greek culture through the translation, examination, and analysis of excerpts of original Ancient Greek texts, such as Herodotus's *Histories*, Plutarch's *Life of Alcibiades*, and Aristotle's *Rhetoric*. Readings in translation will provide students with a broader context for each text and challenge them to consider for which audience and with which objectives these texts were constructed, which people, qualities, and actions they vaunt, decry, or simply leave out, and what role rhetoric plays in each of them. The course will conclude with a capstone project that students will develop with the support of the instructor.

*This course is offered in the fall.*

**CLASSES XI-XII****Ancient Greek 3.2 (m)**

*Prerequisite: with permission from the Classics Department*

This semester-long course will focus on Greek poetry. Students will continue to hone their translation and analytical skills and will also learn about Greek meter and its role in determining genre. They will translate, scan, and examine excerpts from Homer, Sappho, Euripides, Aristophanes, and Callimachus, and will further engage with the material through readings



in translation, secondary sources, and works of literature and art inspired by these texts. The course will conclude with a capstone project that students will develop with the support of the instructor.  
*This course is offered in the spring.*

### ANCIENT PHILOSOPHY

In these two minor courses students will explore the Ancient Greek origins of philosophy in the Western tradition. They will examine the questions Ancient Greek philosophy addressed and how it attempted to answer them. Readings will be drawn from primary sources in translation as well as secondary sources.

### CLASSES X–XII

#### Ancient Philosophy 1 (m)

The class will begin with the natural philosophers of the 6th century BCE, Thales, Anaximander, Anaximenes, Heraclitus, Parmenides, Anaxagoras, and Democritus, who attempted to address the origins and nature of the cosmos and are credited with being the first scientists in the Western tradition. The class will conclude with Plato, who, through the medium of Socrates's teaching, shifted philosophical thinking to virtue, eros, the nature of knowledge, beauty and the common good. Students will engage with the reading through written responses and class discussions and will develop a capstone project that will bring together what they learned over the course of each semester.

*This course is offered in the fall.*

### CLASSES X–XII

#### Ancient Philosophy 2 (m)

The class will begin with Aristotle, Plato's student and Alexander the Great's tutor, who studied and wrote on a range of topics from the natural sciences to poetics and politics. At the conclusion of the semester the class will study the Epicureans and Stoics and explore how these Hellenistic thinkers transformed philosophy and influenced Western thought. Students will engage with the reading through written responses and class discussions and will develop a capstone project that will bring together what they learned over the course of each semester.

*This course is offered in the spring.*

## MODERN LANGUAGES

### FRENCH

#### French 1

This course serves as an introduction to the French language and begins with the most rudimentary aspects of the language. It is intended for students who have no prior experience with French or who would benefit from a comprehensive review of the basics. Though introductory in nature, the pace of the course is quick and is intended to prepare students for French 2 the following year. A large amount of vocabulary is presented and several of the most common tenses are introduced and practiced. This course is open to all students in Classes IX–XII who are beginning their study of French outside of the curriculum sequence begun in Middle School.

#### French 2

In addition to the review and consolidation of the grammatical structures acquired in earlier years of French language study, the future and conditional tenses are studied in depth, along with the subjunctive mood. Short readings about contemporary French culture are used to contextualize grammar and new vocabulary. Students are required to write short compositions, translations, and dictations.

#### French 3

With the expectation that students at this level have mastered fundamentals of grammar and vocabulary, this course rapidly reviews the entirety of French moods and tenses, paying particular attention to common pitfalls that affect even advanced students (such as past-participle agreement or multiple object pronouns). As a common entry point to French in Upper School for Class IX students, this class uses moments from French history to tie into the Class IX trip to London in the fall, as well as elements of French culture (art, gastronomy, etc.) to deepen students' understanding of and connection with the broader context of the Francophone world. By the end of the year, students will demonstrate mastery of increasingly advanced concepts, such as relative pronouns, past infinitives, and present participles.

#### French 4

This is an excellent opportunity for the student requiring more time to hone her writing and speaking skills. It is a natural progression from French 3, allowing the student time to refine her writing as it relates to literary analysis, recounting events, and

stating opinions. As there is a sustained emphasis on not only the practical applications of the language but also the culture to which it is related, reading is varied and includes topics related to art, music, history, and literature in the form of poetry, plays, and novels, as well as non-fictional essays and journalistic reports. At the end of the course, depending on performance and at the discretion of the department, the student may take an Advanced French course or repeat a second level of this course.

## CLASSES XI–XII

### French Minor (m)

*Prerequisite: French 4 or department approval*

Based on authentic written and recorded material, this course will develop comprehension and oral skills by addressing a variety of topics. Students will hone fluency in the spoken language through discussion of contemporary issues in French culture with emphasis on increasing vocabulary and ease in the manipulation of grammatical structures. The course aims to enhance language skills, linguistic awareness, and appreciation of contemporary France and French-speaking countries. Oral participation is required, especially since students will have many opportunities to express opinions and give explanations in the target language in discussions and debates. Particular interests will be integrated into the topics presented in class where possible.

## CLASSES XI AND XII

### Advanced French Language and Culture

*Prerequisite: departmental placement*

In this year long course, students hone their writing, speaking, listening, and reading skills at an advanced level. In the first semester, instruction focuses on reading and writing while providing students with broad exposure to topics of cultural importance in the Francophone world. Readings are drawn from authentic French-language publications (newspapers, magazines, essays, Internet sites, etc.). Through numerous writing assignments, students not only analyze the content of what they read but also reflect on the cultural perspectives and biases that they encounter. In the second semester, the focus shifts to developing greater competency in listening and oral production, with an emphasis on situations students might face when traveling, studying, or working in a Francophone country. As students listen to a range of authentic audio (radio, television, cinema, Internet video, poetry, news reports, etc.), they critically assess and imitate native intonation, accent, register, and presentation styles - making them their own in the process.

## CLASS XII

### The Idealization of Love in the Novels of Québec

*Prerequisite: Advanced French Language or department approval*

In this semester-long course, students read, discuss, and analyze novels in French by four of the most important writers of Québec: *Kamouraska* by Anne Hébert, *La serveuse du café* by Yves Beauchemin, *Bonheur d'occasion* by Gabrielle Roy, and *Maria Chapdelaine* by Louis Hémon. In addition to the thematic of the idealization of love in these novels, students also explore the issues of Québécois identity and nationalism. Students will study the evolution of the French Canadian novel form in its specificity to Québec while continuing to hone their skills in literary analysis.

*This course is offered in the fall.*

## CLASS XII

### French Cinema

*Prerequisite: Advanced French Language or department approval*

As theoretician Ricciotto Canudo stated in *La Gazette des sept arts* of 1920, cinema has become the seventh art, as “rhythmic as dance, music, and poetry.” Due to Hollywood’s dominance, many have forgotten that France is the birthplace of cinema. This semester-long course not only initiates students to significant works produced in France, but they also develop French speaking and writing skills needed for image and discourse analysis. Films viewed, discussed, and studied include: *Ascenseur pour l'échafaud*, *Manon des sources*, *La haine*, *Jusqu'à la garde*, *l'Auberge espagnole*, *Amélie*, and *Le casse-tête chinois*.

*This course is offered in the spring.*

## SPANISH

### Spanish I

This course serves as an intensive introduction to the Spanish language and quickly progresses from basic aspects of the language to more sophisticated forms of writing and speech. It is intended for students who have no prior experience with Spanish or who would benefit from a comprehensive review of the basics. Though introductory in nature, the pace of the course is quick and is intended to prepare students for Spanish 2 the following year. A large amount of vocabulary is presented and the present, preterit, and imperfect tenses (along with all their irregularities) are introduced and practiced. This course is open to all students in Classes IX–XII who are beginning their study of Spanish outside of the curriculum sequence begun in Middle School.

**Spanish 2**

In addition to the review and consolidation of the grammatical structures acquired in earlier years of Spanish language study, the subjunctive and imperative moods are studied in depth. With the continued emphasis on the acquisition of active skills in writing and speaking, frequent short compositions and translations are required. Students must engage in short historical and cultural readings in which vocabulary and syntactical structures are contextualized.

**Spanish 3**

In this course students begin more process-oriented writing and speaking. The entirety of Spanish moods and tenses is reviewed and students are expected to use relative clauses, higher-order idioms, and a richer variety of vocabulary actively in both composition and oral presentations. Short literary selections in poetry and prose are introduced to contextualize the grammar and to introduce the richness of Hispanic culture and history.

**Spanish 4**

This is an excellent opportunity to hone one's skills in writing and speaking. The focus of the course content is on cultural readings as they relate to interests in national lifestyles, the history of art, popular music, politics, and current events. The readings are for the most part excerpts of Spanish-language magazines and newspapers. Writing assignments require in-depth analysis and presentation of a particular point of view, while incorporating sophisticated syntactical devices and higher-order idiomatic expressions.

**CLASSES XI-XII****Spanish Minor (m)**

*Prerequisite: Spanish 4 or department approval*

Based on authentic written and recorded material, this course will develop comprehension and oral skills by addressing a variety of topics. Students will hone fluency in the spoken language through discussion of contemporary issues in Spanish and Latin American cultures with emphasis on increasing vocabulary and ease in the manipulation of grammatical structures. The course aims to enhance language skills, linguistic awareness, and appreciation of the contemporary Spanish-speaking world. Oral participation is required, especially since students will have many opportunities to express opinions and give explanations in the target language in discussions and debates. Particular interests will be integrated into the topics presented in class where possible.

**CLASSES XI AND XII****Advanced Spanish Language and Culture**

*Prerequisite: departmental placement*

In this year long course, students hone their writing, speaking, listening, and reading skills at an advanced level. In the first semester, students explore a broad range of writing styles and genres while developing their critical writing and reading competencies. The reading list covers a variety of authentic literature (novels, short stories, poetry, news reports, magazine articles, etc.) Writing assignments require in-depth analysis and presentation of a particular point of view, while incorporating sophisticated idiomatic usage. In the second semester, students are exposed to a broad range of presentational speaking in Spanish (including radio, television, cinema, speeches, etc.). The course requires that students respond creatively and effectively within a broad range of real-life situations while producing dialogues, skits, and formal presentations.

**CLASS XII****Power, History, and Love in the Works of Gabriel García Márquez**

*Prerequisite: Advanced Spanish Language and Culture or departmental approval*

In this semester-long course, students will study the fiction of Gabriel García Márquez, the author of: *La hojarasca*, *La mala hora*, *Los funerales de la Mamá Grande*, *La increíble y triste historia de la cándida Eréndira y su abuela desalmada*, *Crónica de una muerte anunciada*, and *Cien años de soledad*. Students will witness the evolution of the novelist while exploring recurrent themes such as dictatorship, love, and old age. Students will discuss and write about their readings in Spanish in order to appreciate the richness of Gabriel García Márquez's narrative and why he remains one of the greatest literary geniuses of his generation. *This course is offered in the fall.*

**CLASS XII****A Survey of Spanish and Latin American Art**

*Prerequisite: Advanced Spanish Language and Culture or departmental approval*

In this semester-long survey course, students explore definitions of art as related to painting, sculpture, architecture, music, and crafts of various types. Topics vary from the Spanish baroque to cubism, surrealism, and the *generación de la ruptura* in South America. Examples of artists studied include: Velázquez, Goya, Dalí, Picasso, Botero, El Greco, and Miró. Students acquire the critical vocabulary necessary to discuss art in an academic setting with the continued emphasis on honing speaking and writing skills at the advanced level.

*This course is offered in the spring.*

**MANDARIN CHINESE****Chinese 1**

This introductory course in Mandarin focuses on the fundamentals of reading, writing, and speaking. As with any beginning language course, the focus is on practical skills relevant to the daily lives of students. Students in this course should prepare themselves for a considerable amount of memorization, especially given the use of characters in writing. This course is open to all students in Classes IX–XII who are beginning their study of Mandarin outside of the curriculum sequence begun in Middle School.

**Chinese 2**

This course is a natural continuation of what was covered in Chinese 1. A significant amount of new vocabulary and characters is added to this curriculum. Authentic readings are incorporated in the instruction to allow students to contextualize their understanding of written and spoken Mandarin. This course may be repeated for a second year if a student requires more time to consolidate her familiarity with the material.

**Chinese 3**

In this course, special attention is given to the mastery of written Mandarin in a variety of social and academic situations. Authentic texts, including contemporary media used in everyday life in China, are incorporated to help students gain practical skills in Mandarin. In conversation, students are taught to speak more colloquially; furthermore, grammar becomes increasingly abstract.

**Chinese 4**

Although students enrolled in this course continue to hone their skills in writing, reading, listening, and speaking, the materials studied focus more heavily upon contemporary Chinese society and cultural appropriateness. Selected readings come primarily from newspaper and magazine articles. Not only are students expected to use the target language more extensively in speaking on a variety of topics, but they also write longer and more in-depth compositions in reaction to what they must read. By the end of the course, it is expected that students be able to express in considerable detail cultural differences between China and the United States. As the emphasis shifts increasingly to written expression, more classical forms of writing and idiomatic usage are to be mastered.

**CLASSES XI–XII****Chinese Minor (m)**

*Prerequisite:* Chinese 4 and/or department approval  
Based on authentic written and recorded material,

this course will develop comprehension and oral skills by addressing a variety of topics. Students hone fluency in the spoken language through discussion of contemporary issues in Chinese culture with emphasis on increasing vocabulary and ease in the manipulation of grammatical structures. The course aims to enhance language skills, linguistic awareness, and appreciation of contemporary China and Taiwan. Oral participation is required, especially since students will have many opportunities to express opinions and give explanations in the target language in discussions and debates. Particular interests will be integrated into the topics presented in class where possible.

**CLASSES XI AND XII****Advanced Chinese 1 and 2**

*Prerequisite:* Departmental approval

These advanced courses are designed for students who have achieved a high intermediate to advanced level of proficiency in Mandarin and wish to strengthen their spoken fluency. Students continue to develop their skills through readings, written practice, and discussions of a variety of topics as these relate to contemporary China and Taiwan. These topics range from the environmental, to the artistic, to pop culture, to the economic, to societal changes, etc. Students develop their skills through the study of authentic printed materials, recorded segments, or Chinese-language films. The student's work at both levels of study varies from the traditional written composition to oral presentations in the target language.

**COMPUTER SCIENCE****CLASS IX****Programming (m)**

This course is a year-long introduction to web development and is built around the study of HTML, CSS, and JavaScript, the core technologies of the modern web browser. Students learn how these technologies, combined with the client-server model, are critical to the worldwide web. Using these technologies and computational thinking, students design and build their own interactive websites with increasing difficulty and sophistication.

**CLASS X****Engineering and Design (m)**

This semester-long course is an elected part of the required Arts and Digital Design sequence in Class X. In this course, students learn how to apply a variety of tools and technologies to prototype and develop their own innovations and re-imaginings that have real-world applications. Students use these skills

to develop fluency in current technologies, grow as empathetic creators and collaborators, and become part of the worldwide maker community. The course begins with several weeks dedicated to skill building, moves to collaborative project-based units, and culminates in an independent theme-based project by each student.

*This course is offered in the fall and spring.*

#### CLASSES XI AND XII

##### **Programming Interactive Graphics (m)**

Computers play an important role in almost every aspect of modern society. No longer are they limited to the arenas of business and research, but they have emerged as integral to the creation and generation of graphics. This semester-long course is an exploration of methods for creating computer-generated graphics. Students will build their repertoire of programming skills and develop techniques for algorithmic problem solving, as they use programming languages and other emergent technologies in the development of meaningful personal projects.

*This course is offered in the fall.*

#### CLASSES XI AND XII

##### **Web Application Development (m)**

In this one-semester, second-level programming course, students will expand upon their introductory work in JavaScript and learn to apply those skills to server-side scripting. Using node.js, students will learn to work with Application Programming Interfaces (APIs) in the creation of web applications.

*This course is offered in the spring.*

### ENTREPRENEURSHIP

#### CLASSES X-XII

##### **Business Development for the Young Entrepreneur (m)**

This semester-long course gives the aspiring young entrepreneur the full breadth of information needed to bring a concept for a business from idea to start-up. Students will learn how to develop a business concept, test market conditions, develop a budget and financial model, create marketing and advertising material, and plan a strategy for communicating the plan to potential lenders/donors. At the end of the semester, students will present their concepts to their peers and potential funders in a formal setting. Students may choose to work in groups or alone and will be guided throughout the semester by various experts and faculty.

*This course is offered in the fall.*

### HEALTH AND WELLNESS

#### CLASS IX

##### **Foundations in Health and Wellness (m)**

This course establishes the foundation for health and wellness education in Upper School. Students will develop their decision-making, communication, and media-literacy skills while exploring identity and relationships, and navigating adolescence. Students will begin to identify and clarify personal values affecting physical, mental/emotional, and social health, while thinking critically about real-life health scenarios for teens. Students take a personal safety course that focuses on healthy relationships, consent, and intimate partner violence. This semester-long course is graded on a high pass/pass/fail basis, and is required for all Class IX students.

#### CLASS X

##### **Adolescent Health (m)**

Building on the skills introduced in the Class IX curriculum, students in Class X will delve further into issues affecting adolescent health issues and will further develop their decision-making, communication, and media-literacy skills that can be applied in a range of health scenarios related to physical, mental/emotional, and social health. Students take a personal safety course that focuses on developing physical and verbal skills in response to boundary-crossing behavior. This semester-long course is graded on a high pass/pass/fail basis, and is required for all Class X students.

#### CLASS XI

##### **Adolescent Health 2.0 (m)**

Students in Class XI will explore wellness topics for adolescents while considering their developing personal values and applying them to real-life health scenarios. This course will address a range of functional knowledge in the areas of gender and sexuality, substance use, and mental health, all with an equity lens and considering the five social determinants of health. This course meets in the fall semester and is graded on a high pass/pass/fail basis, and is required for all Class XI students.

#### CLASS XII

##### **Personal Wellness (m)**

This course explores the intersections of physical, mental/emotional, and social health in an effort to best prepare students for independent living and proactive self-care in the future. Students conduct a personal wellness inventory and practice goal setting.

Topics discussed are determined by students and current issues in wellness for emerging adults. This course meets in the spring semester and is graded on a high pass/pass/fail basis, and is required for all Class XII students.

## GOING BEYOND BARRIERS

Going Beyond Barriers is a required four-year sequence comprised of the courses listed in this section.

### CLASS IX

#### **Agents of Change (m)**

This required seminar is a survey course designed to introduce students to the concepts of inequality, systems of power, social justice, civic engagement, and community issues. Through self-reflection, readings, and field trips, students have the opportunity to learn about their own role in their communities and to discover their potential to make an impact. This work will inform their service and justice work during the following three years in the Upper School.

### CLASS X

#### **Leadership (m)**

Using a research-based framework called *The Student Leadership Challenge*, this required course is organized around the following principles: (1) leadership is an identifiable set of skills and abilities available to everyone, (2) the abstract concept of leadership can convert into easy-to-grasp behaviors that can be learned, and (3) leadership is an ongoing process that benefits from practice. Underlying the research is a belief that leaders lead most effectively when they are at their personal best; in this course, students learn to identify when that happens and how they can leverage their strengths toward a positive impact.

### CLASS XI

#### **Public Speaking (m)**

This course is an introduction to the fundamentals of good communication skills. Students prepare approximately eight speeches of varying lengths on topics of their choice for presentation to the class. They learn to critique their own work as well as that of their classmates.

### CLASS XII

#### **Essential Questions of the Mind and Heart:**

#### **A Capstone Course on Questions in Psychology, Philosophy, and Ethics (m)**

In this course, seniors will explore and discuss numerous essential questions in the fields of psychology, philosophy, and ethics that have inspired humans and citizens throughout time. At the beginning of the term, students pose one essential question of their choosing, and their readings are in pursuit of that individual, overarching question.

## VISUAL ARTS

### CLASSES XI AND XII

#### **Advanced Art: Projects in Art**

*Prerequisites: Permission of the department head and two semesters of art electives, one of which must be in the chosen area of concentration*

This is a year-long\* course that offers an immersion in the techniques, aesthetics, and practice of the student's choice of one of the following four disciplines: ceramics, drawing, painting, or photography. Upon acceptance into this course, students must submit a written proposal outlining the body of work that they wish to pursue: its conceptual content, technical skills to be mastered, and genres to be explored. Every student will complete three projects exploring observation, process, and subject.

Students and instructors from all four disciplines will meet together once every eight-day cycle for group discussions of assigned readings, work-in-progress critiques, and museum and gallery visits. At the end of each semester, students will present their work in a completed portfolio, together with a written narrative and a research paper on an artist or art movement of their choice.

\*This course may be taken for one semester with the approval of the department head.

### ELECTIVE OFFERINGS

All of the courses in this section are semester-long courses.

### CLASS IX

#### **Ceramics (m)**

Students will work to develop and hone skills—technical and artistic. Students will learn to articulate their aesthetic choices which will inform and create a personal visual language. The exploration of form, volume, texture, color, and scale will lead to



both traditional and experimental ceramic pieces. There will be opportunities to create sculptural and functional pieces, utilizing both wheel-throwing and handbuilding methods. In conjunction with studio work, we will explore historical and contemporary ceramics through slide/video presentations, class discussions and critiques.

*This course is offered in the fall and spring.*

#### CLASS IX

##### **Darkroom Photography (m)**

This is an introductory course in traditional black-and-white photography, as well as alternative processes. Students will learn to process and print from their own film. Particular emphasis is given to the creative application of focus, field of vision, and lighting.

*This course is offered in the fall.*

#### CLASS IX

##### **Digital Imaging (m)**

This course is oriented toward graphic design. Students will work on the computer using the software program Photoshop, and they will observe various images in the media, which will lead to projects such as posters and CD covers.

*This course is offered in the spring.*

#### CLASS IX

##### **Experiments in Drawing (m)**

Students will develop visual competence in representational drawing. This will include lessons involving tone, value, shape, form, and composition, as well as one- and two-point perspective. A variety of drawing materials, such as pencil, charcoal, and pastel, will be used.

*This course is offered in the fall.*

#### CLASS IX

##### **Introduction to Painting (m)**

Students will investigate the fundamentals of painting and drawing of the still life, landscape, and the figure. They will work primarily from direct observation. Assignments will address composition, the representation of space and form, the modulation of color, and atmospheric perspective.

*This course is offered in the fall and spring.*

#### CLASSES X–XII

##### **Ceramics (m)**

Students will work to further develop and hone skills—technical and artistic. Students will learn to articulate their aesthetic choices which will inform and create a personal visual language. There will be opportunities to create sculptural and functional pieces, utilizing

both wheel-throwing and handbuilding methods.

In conjunction with studio work, we will explore historical and contemporary ceramics through slide/video presentations, class discussions and critiques.

*This course is offered in the fall and spring.*

#### CLASSES X–XII

##### **Life Drawing (m)**

Working from anatomical studies, wooden figures, and live models, students learn the fundamentals of representing the human figure in a variety of media, including pencil, charcoal, and ink. This will include exploring the principles of measurement, while applying a variety of mark-making techniques.

*This course is offered in the spring.*

#### CLASSES X–XII

##### **Painting (m)**

In this course, the projects are initially teacher-directed technical studies exploring the various principles and elements of two-dimensional art. As the students' capabilities mature, the projects become more self-directed and individualized.

*This course is offered in the fall and spring.*

#### CLASSES X–XII

##### **Photography I (m)**

Students master the use of the manual SLR through a series of assignments designed to address composition, proper exposure, and the creative use of depth of field. Additionally, students learn basic black-and-white darkroom skills and are given a general introduction to the history of photography. Contemporary trends in the medium are also introduced through illustrated lectures, reading assignments, and visits to galleries and museums.

*This course is offered in the fall and spring.*

#### CLASSES X–XII

##### **Photography II (m)**

*Prerequisite: Photography I*

This course builds on the foundation of Photography I. Students progress from assignments designed to master technical skills to ones that allow them to explore subjects of personal interest. In addition, they are exposed to a variety of traditional non-silver processes and introduced to the possibilities of digital imaging. Students are required to visit galleries and museums and to do one in-class presentation on a current exhibit. At the end of the semester, students submit a portfolio on a theme of their choice.

*This course is offered in the fall and spring.*

## ART HISTORY

## CLASS X

**Introduction to Art History (m)**

Exploring selected themes in art, students will view and analyze a wide variety of art works in different mediums from around the world and a range of historic periods. While this semester-long, introductory course is not a comprehensive survey, the class presents a basic overview of art from antiquity to the present, including the achievements of artistic giants, spanning from Leonardo da Vinci to Kara Walker.

*This course is offered in the fall and spring.*

## CLASSES XI AND XII

**Advanced Art History**

Advanced Art History is equivalent to a 100 level art history survey course, following a roughly chronological approach, beginning from global prehistory to global modernisms and contemporary art. This year-long, intensive course provides students with the opportunity to deepen their knowledge and understanding of specific art works, traditions and movements, to contextualize art making practices and to refine analytical skills in their reading of art.

## VISUAL EDUCATION

## CLASSES IX–XII

The visual education program is an essential component in Upper School classes. Works of art are incorporated into English, history, mathematics, art history, classics, modern languages, and art classes. Students learn to observe and analyze works of art and discuss them with reference to formal qualities as well as historical and cultural context. Through studying visual images, students learn art history and develop the ability to express and support their interpretations while learning to value the ideas of others. Students combine classroom work with visits to local museums and cultural institutions.

## DRAMA

## CLASS IX

**Acting I (m)**

This semester-long course will be an intensive workshop in theater arts and will focus on voice and movement, improvisation and scene study. Students will be encouraged to participate in a fall production working either on stage or backstage. This course will also emphasize New York's role as a main resource to the theater community and includes attendance at Broadway and Off-Broadway plays.

## CLASSES X–XII

**Acting II (m)**

*Prerequisite: Acting I*

This semester-long workshop is an advanced scene study course where roles are assigned requiring more imagination, technique, and concentration. Emphasis will be on the actor, through study, rehearsal, and performance. Students will work on scenes in classical drama from Greek tragedy to Shakespearean comedy. This course is taught by a professional guest actor.

## CLASSES IX–XII

**Fall Play (m)**

Each fall, interested Upper School students have the opportunity to audition for and present a play or to work backstage. Students receive a semester of arts credit for their demonstrated commitment to the production, which includes regular attendance at rehearsals throughout the entire production period. Rehearsals are held three afternoons per week and on two weekends.

## CLASSES IX–XII

**Spring Musical (m)**

Each spring, interested Upper School students have the opportunity to audition for and present a full-scale musical or to work backstage. Students receive a semester of arts credit for their demonstrated commitment to the production, which includes regular attendance at rehearsals throughout the entire production period. Rehearsals are held three to five afternoons a week (depending on a student's role) and on three weekends.

## MUSIC

## CLASS X

**Music Appreciation (m)**

This semester-long course is an elected part of the required Arts and Digital Design sequence in Class X. It explores music as a verb: active and always in the present, whether we are listening to Bach's Goldberg Variations or a brand new remix of an Ariana Grande song. Each class centers on a theme rather than a time period; themes range from folk songs to choral music, film scores to contemporary popular music. Through classroom listening and discussion, students learn to analyze music aurally and acquire the musical vocabulary necessary to examine contrasting styles and genres of music. Assignments include written reviews of various musical pieces and a final student-driven project. Previous guest speakers have included contemporary-classical pianist/composer Timo Andres and Tony Award-winning composer Jeanine Tesori.

*This course is offered in the fall and spring.*

## ELECTIVE OFFERINGS

In addition to the following courses, several extracurricular performance options are available, including chamber ensembles (small group instrumental ensembles), *Bassless Accusations* (the Upper School a cappella group), and *Gospel* (the Upper School gospel choir).

## CLASSES IX–XII

**Upper School Chorus (m)**

Upper School Chorus is a non-auditioned singing group that rehearses twice in the eight-day cycle. The ensemble performs at the annual winter and spring concerts as well as the Interschool Choral Festival. Healthy vocal technique, sight-reading, and listening skills are all developed. Repertoire is chosen from a wide variety of styles, periods, cultures, and genres. Students receive arts credit for participation in Upper School Chorus.

## CLASSES X–XII

**Upper School Chamber Chorus (m)**

*Prerequisite: Strong sight-reading and aural skills; must be any one of the following: (i) a member of Upper School Chorus or Chamber Music Ensemble, (ii) enrolled in a Composition class, or (iii) enrolled in one of the Guitar classes.*

Upper School Chamber Chorus is an auditioned singing group that rehearses three times in the eight-day cycle. This highly selective group (14-20 singers) performs challenging repertoire, including Renaissance, Baroque, contemporary classical, and vocal jazz pieces that are suited to a small, advanced ensemble. The ensemble regularly performs around the city, participates in the state music contest, and tours both domestically and internationally. Students receive arts credit for participation in Upper School Chamber Chorus.

## CLASSES IX–XII

**Chamber Music Ensemble (m)**

Chamber Music Ensemble, formerly known as Upper School Ensemble, is open by audition to string, wind, and piano players. The class offers opportunities for students to experience chamber music in a variety of configurations based on the ability and instrumentation of the students. Music will range from classical to contemporary works. Students receive fine arts credit for this class.

## CLASSES IX–XII

**Upper School Guitar (m)**

The Upper School Guitar program offers a series of courses designed to meet the needs and interests of all students. Beginning students develop a basic skill set and build techniques suitable to a wide range of styles. Subjects covered include learning basic chords and accompaniment styles, reading guitar tablature, and playing guitar introductions, riffs, and solos. Students with some previous experience learn more advanced chords and accompaniment styles, simple solo playing, and basic chord theory. Students with a strong background play music in a variety of styles to help refine and strengthen their technique. All interested players will be placed in an appropriate section after consultation with the instructor. Students receive arts credit for participation in any guitar class.

## CLASSES IX–XII

**Music Theory (m)**

Music Theory offers students the opportunity to learn fundamental components of music. Topics will include formation of major and various minor scales, identifying and using key signatures and time signatures, understanding harmonic progressions in various genres, an introduction to voice leading, improvement of aural skills, and theoretical

components of non-western music. The curriculum will be further individualized to explore specific student's areas of interest or curiosity. Through homework exercises, listening activities, and class discussions, students will gain a deeper understanding of the "rules" that guide nearly all genres of music. The course will culminate in a student-selected final project that allows individuals to explore in greater detail a topic of their choosing. *This course is offered in the spring.*

#### CLASSES IX–XII

##### **Music Composition I (m)**

In this semester-long class, students experiment with a range of small-scale composition projects to build their portfolios. Each workshop involves both analysis of music from a wide range of eras, as well as composition exercises to understand the nuts and bolts of the process. Students regularly share and revise their work. They also develop skills in notating music using Noteflight. The syllabus is catered to student interest and background, while simultaneously stretching students to experiment with new forms, instruments, and sounds. The class culminates in a final performance of new works for their peers.

*This course is offered in the fall.*

#### CLASSES X–XII

##### **Music Composition II (m)**

*Prerequisite: Music Composition I*

In this year-long, tutorial-style course, students will tackle a large-scale composition project of their choice: for instance, a piano sonata, a string quartet, or a song cycle. Classes will involve analysis of music from a wide range of eras and styles, as well as composition/theory exercises. Students will regularly share and revise their work. They will also develop skills in notating music using Noteflight. The syllabus will be catered to student interest and background, while simultaneously stretching students to experiment with new forms, instruments, and techniques. Students will attend concerts of new works throughout New York City, and professional composers and musicians will visit class to perform and critique students' works in progress. The course will culminate in a final performance of new works for their peers.

## DANCE

#### CLASSES X

##### **Dance History (m)**

This semester-long course is an elected part of the required Arts and Digital Design sequence in Class X. Through research and analysis, students in this course gain a sense of the development of dance styles throughout history.

*This course is offered in the fall and spring.*

#### ELECTIVE OFFERINGS

Upper School dance elective topics change on a rotating basis and include the following: *Dance on Camera, Dance in Unexpected Places, Dance and Politics, and Dance and Gender*. These project-based electives give students the opportunity to study dance as part of their academic program. Since dance is both a physical discipline and a performing art, credit for a dance elective may be used for either physical education or art.

#### CLASSES IX–XII

##### **Dance and Politics (m)**

In this course, we will explore dance that reaches beyond convention into the category of political. All of the artists covered in this course are alive and still working in the field. Through video, readings, informal talks, and classes with guest artists, this class introduces dance that reaches into political expression to comment on contemporary issues. This class is designed to combine watching videos, reading and/or hearing about the background and reception of these dance projects, sharing our responses, and ultimately creating and participating in a similar dance project. We'll move, talk and share our impressions. Bring an open mind.

## ONE SCHOOLHOUSE

One Schoolhouse provides online courses for a consortium of independent schools around the world, allowing students to pursue particular academic interests beyond the relevant courses available at their home school. Participation in One Schoolhouse is for Class XII and requires permission from a student's dean and division head. Students interested in One Schoolhouse should discuss the option with their dean. For more information, visit [oneschoolhouse.org](http://oneschoolhouse.org).

## INDEPENDENT STUDY PROGRAM

### CLASS XII

The Independent Study Program (ISP) offers seniors the opportunity to pursue an area of interest independently in the spring, under the direction of a faculty mentor. Students may drop up to two major courses in the spring term to free up the time necessary to examine, in depth, a topic of their own choice. Students have regular meetings with their in-school faculty mentor and also attend a seminar at which they present brief reports on their progress. All projects involve research, as well as a written paper. At the end of the term, students present their completed projects in public, and their work is evaluated by a committee of ISP mentors.

Some examples of past ISP topics include:

- Hydroponic Gardening in Schools: The Future of Urban Agriculture
- The Great Divide: Media and the End of Bipartisanship
- Write Here, Write Now: A Journey through the Literary Magazine Submission Process
- Status Unknown: Social Media's Impact on Mental Health
- Strangers in Town: A Documentary About Gentrification in Brooklyn
- The Inflammasome and its Role in the Adaptive Immune System
- The Social Implications of the Negro Spiritual and Early Gospel Music
- Art as Destruction: Changing Perception Through Sculpture
- *Whirlwind for Hire*: The Creation of a New Musical
- My Life in Pie: Autobiography Through Food

## COMMUNITY ENGAGEMENT

### CLASSES IX–XII

#### Community Engagement Requirement

At Nightingale, community engagement is integral to educating students as global citizens. By working with others in our neighborhoods, students understand the systems in our society and their own ability and obligation in standing side by side with those in need and those who work to eliminate societal needs through grassroots, non-profits, and governmental agencies. Each year, all students in Classes IX–XII must demonstrate a sustained service commitment. Students in Class IX fulfill this commitment through the Agents of Change course, while students in

Classes X–XII must choose one organization to support each year with a minimum of four visits, though most students spend far more time with their chosen organization. In addition to this sustained commitment, students must participate in one cross-divisional event each year within our school community. At the end of the school year, students complete a reflection to demonstrate their level of engagement and learning from their service commitment.

## PHYSICAL EDUCATION

### CLASSES IX–XII

In the Upper School, students begin to learn where their interests lie, and our program exposes them to a variety of opportunities to find activities to which they can connect. The goal of our program is to provide students with a foundation on which to pursue lifelong fitness. Enjoyment of—and appreciation for—physical activity as part of a healthy lifestyle are the fundamental components of our curriculum.

A variety of PE courses are offered each quarter within the three areas of focus described below. Over the course of the year, students must select at least one class from each area of focus; their fourth class may come from the focus area of their choice.

#### Mind/Body

Students will explore yoga, Pilates, meditation, myofascial-release techniques, and other methods that explore the connection between the mind and body. Self-reflection and stress reduction techniques allow students to explore methods of self-regulation and build resilience.

#### Fitness

This area of focus encompasses many different forms of activity that aim to increase stamina, strength, and athleticism. The goal is to increase physical knowledge and wellness regardless of one's perceived ability, to identify and apply correct movement patterns, and to promote longevity through fitness. Students will use various technological applications to enhance their understanding.

#### Games and Sport

Students will participate in various games and team sports that foster teamwork, strategy, leadership, and comradery. Students learn the history, rules, and impact of these activities as it relates to life long fitness.

If a student is on a Nightingale athletic team, she is exempt from physical education for the duration of that team's season. Subject to departmental approval, students in Classes X–XII may also receive a PE exemption for a significant commitment to an outside athletic team or other athletic endeavor, including dance, by applying for Alternate Athletic credit.

## ATHLETICS

Nightingale recognizes the value and importance of athletic participation for girls. We offer a wide-ranging program of competitive teams for our students. Participation on a team fulfills a student's physical education requirements for that season.

### Fall Season

JV and Varsity Volleyball  
Varsity Cross Country  
Varsity Soccer  
Varsity Tennis

### Winter Season

JV and Varsity Basketball  
Varsity Indoor Track  
Varsity Squash  
Varsity Swimming

### Spring Season

Varsity Badminton  
Varsity Lacrosse  
Varsity Softball  
Varsity Track and Field

## LIBRARY

Research and reading are the twin pillars of the Upper School library program. In close collaboration with faculty, librarians support project-based contextual research integrated throughout the curriculum. Librarians teach traditional and emerging literacies which empower students to critically use and assess a variety of information sources. Individual conferences and small group instruction provide important practice in articulating research questions, investigating robust lines of inquiry, and corroborating evidence to enhance validity and reliability. Students have access to a full suite of digital and print resources including peer reviewed journals, primary sources, historical newspapers and an extensive library of physical

and eBooks. We make the most of resources around New York City, incorporating archives and resources from neighborhood associations, historical societies, public and specialty libraries. Through partnerships with local organizations, we offer a range of interdisciplinary signature projects that give students a chance to conduct hands-on research. The library's diverse collection reflects the community's wide range of interests, perspectives, abilities and identities and promotes a lifelong appreciation of literature. Student-driven book clubs and the Library Advisory Board give students leadership opportunities to engage in library programming and collection development. Our goal is to cultivate curious, independent, creative, and agile thinkers who will thrive in a college environment equipped with skills for life.

## THE ADVISORY SYSTEM

Each grade has its own dean and homeroom coordinator, who work together closely throughout the year. In partnership with the advisors (see below), class deans are responsible for supporting each individual student and being in contact with parents as needed, while homeroom coordinators keep an eye on the upkeep and programming of the grade as a whole.

When students first enter the Upper School, they are assigned to a Class IX group advisor, who guides them through the new experiences of Upper School and helps them begin to find their voice and learn to advocate for their own academic, social, and emotional needs. At the end of Class IX, each Upper School student chooses her own individual advisor (a member of the school's faculty and staff) and arranges regular meetings for support and guidance. This extensive advisory system offers individual attention to each student as she masters a demanding program that emphasizes critical thinking and active learning. Advisors help students to develop not just academically, but morally, emotionally, and socially, guiding their advisees in making choices and using good judgment as they encounter each phase of their development. Other teachers, coaches, administrators, the school nurse, and school counselors are also all available for consultation and encouragement. The strong relationships students develop with their advisors and other adults in the schoolhouse are critical to their growth; students leave Nightingale as thoughtful, engaged, and caring citizens, ready for the challenges ahead of them in college and beyond.



## COLLEGE COUNSELING

The rigorous academic program at Nightingale ensures that each student who graduates from the school will be prepared to succeed in a challenging college curriculum. Each year all of Nightingale's senior class are accepted to selective colleges in the U.S. and abroad. College counseling begins with course selection in the Upper School to make sure that each student completes the courses required for college admissions and takes the necessary standardized tests. Throughout their Nightingale years, students are encouraged to challenge themselves in the classroom, explore and develop passion and expertise in their extracurricular interests, and to search for ways to contribute to the good of their community, both inside Nightingale and in the world beyond.

The process of identifying prospective colleges begins officially in the junior year. Students and their parents work with the college counselors to develop a list of colleges that are appropriate for each student. Individual and small group meetings with students focus on understanding the application process, researching colleges, and essay writing, as well as developing interview, self-assessment, and mature decision-making skills. The Nightingale-Bamford School is proud of the quality and wide range of colleges chosen by its graduates.

## THE INTERSCHOOL PROGRAM

Nightingale is a member of Interschool, a consortium that includes Bearley, Browning, Chapin, Collegiate, Dalton, Nightingale-Bamford, Spence, and Trinity. It offers courses and programs that change from year to year depending on student interest, and non-academic and academic opportunities are coordinated among these schools. Class X students have a three-day trip to Frost Valley, NY, in January with other members of Interschool.

## OFF-CAMPUS STUDY OPTIONS

In addition to the off-campus study options listed in this section, other travel opportunities are offered periodically and tied directly to the curriculum. Class IX travels to London for a week every fall, and other trips have included travel to China, Cuba, Iceland, Italy, Spain, South Africa, the Dominican Republic,

and Colombia. At the end of Class IX, students may apply for the Global Planning and Round Square Committee, which leads the Upper School in incorporating the Round Square consortium and global issues into the life of our community. Round Square is a consortium of more than 200 schools from 50 countries around the world and allows our students to develop global competencies, attend conferences and service projects, and participate in additional exchanges. Any student may apply for an exchange to a Round Square school regardless of her participation in the committee.

Through the Round Square consortium, Nightingale is planning reciprocal exchange opportunities for our students at schools where our students can practice the modern languages that they have been studying in our classrooms including Spanish in Perú, Colombia, Argentina and / or Chile, French in Quebec, and Mandarin in China. We are also planning an exchange with the Mayo College for Girls in Ajmer, India.

International exchanges beyond those listed below may be arranged through the Round Square network.

### CLASS X

- Australian exchange with Ascham School in Sydney, six weeks
- South African exchange with St. Mary's School in Waverly, Johannesburg, three weeks
- Swiss Semester in Zermatt, first semester
- AUSNYC Immersion Program, three student ambassadors will spend three weeks in Australia and return to lead their classmates in groundbreaking parallel social impact and leadership programs at Nightingale and two schools in Australia (Ruyton and Wilderness).

### CLASS XI

- English exchange with St. Paul's Girls' School in London, two weeks
- High Mountain Institute in Leadville, CO, one semester
- Maine Coast Semester at Chewonki in Wiscasset, ME, one semester
- Mountain School of Milton Academy in Vershire, VT, one semester
- School for Ethics and Global Leadership in Washington, DC, one semester
- School Year Abroad (SYA) in China, France, Italy, or Spain, full year (one semester in China is also an option)

## EXTRACURRICULAR ACTIVITIES

In addition to team sports (see Athletics) and dramatic productions (see Drama), extracurricular activities include the following:

Admissions Tour Guides  
 Arts Board  
 Asian Culture Club  
 Athletic Board  
 Bassless Accusations (*a cappella* group)  
 CAFE (Cultural Awareness for Everyone)  
 Carmina (arts newsletter)  
 Chamber Chorus\*  
 Chorus\*  
 Comedy Club  
 Community Engagement Board  
 Debate  
 Drama Club  
 Ensemble (instrumental music)\*  
 Environmental Board  
 Film Club  
 Finance Club  
 Gardening Club  
 Gospel Girls  
 Inclusivity Board  
 Ladies of Color Stand  
 Latin Club  
 Makers' Club  
 Mathletes  
 Medical Club  
 Model Congress  
 Nightingale Dance Collective  
 Opera Club  
 Peer Tutors  
*Philomel* (Upper School literary magazine)  
 Robotics Team  
 Science Club  
*Spectator* (Upper School newspaper)  
 Spectrum (gay-straight alliance)  
 Step Up (activism club)  
 Student Council  
 Teach Through Animals  
 Technology Board  
*Time Regained* (current affairs journal)  
 Women's Rights Club  
 Yearbook

\*Students in Chorus, Chamber Chorus, or Ensemble rehearse during the school day and receive arts credit for their participation.