



Curriculum Guide

2025-2026



Lower School

2024-2025 CURRICULUM GUIDE

LOWER SCHOOL

Overview

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.

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 also encourage students to work collaboratively and to become effective group members. Daily class meetings encourage 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 each child to develop an effective approach to learning.

Throughout the Lower School program, there is a commitment to diversity, equity, and social justice work reflected in every classroom. 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. Warmth, understanding, and respect are central to our program, which is based on Jean Piaget's concepts of child development. 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 each child to move at her own appropriate pace within the framework of class expectations.

ENGLISH & READING

Nightingale encourages a love of reading and writing. The English and Reading program is designed to prepare students to become fluent readers and writers, good listeners, and confident speakers. Students read a varied selection of literature throughout their time in Lower School, including but not limited to decodable texts, fiction and nonfiction, biography, poetry, folktales, and plays. English and reading are taught daily. The English curriculum, anchored by The Writing Revolution, provides regular practice of oral and written communication 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 journal writing throughout the Lower School. They are explicitly taught and guided through each step of the writing process, beginning with brainstorming and ending with publication. Reading, spelling, and handwriting is taught using multisensory techniques. Reading is approached through phonetic and sight word work using PAF and Foundations as a base, with other programs and material woven into instruction. Daily lessons include spelling, handwriting, vocabulary, grammar, and word processing. Dictation is a part of each reading lesson and approaches accurate spelling through phonetic patterns. Students work in small groups designed to accommodate various learning needs and styles. Reading is part of each child's daily homework.

KINDERGARTEN

Reading readiness is taught in small groups. Students participate in oral language, listening, and writing activities intended to help them build the skills needed to become developing readers and writers. Various activities are designed to reinforce efficient and automatic sound/symbol correspondence that will eventually lead to accurate phonetic analysis. Students keep a journal throughout the year to encourage their creativity and independent thought. Handwriting is taught, using PAF motor patterns, emphasizing correct letter formation and sound symbol relationships. Regular story time exposes students to a rich program of literature.

CLASS I

The reading program in Class I fosters a confident attitude towards reading and an enjoyment of books. Reading skills are taught through phonics instruction, dictation, and sight vocabulary. The program emphasizes oral reading and comprehension skills, focusing on fluency and expression. Listening skills, handwriting, vocabulary, creative expression, journal writing, and spelling are integral parts of the program. Students use and are exposed to graphic organizers and editing marks to assist them in the writing process. Utilizing elements of The Writing Revolution, students learn to expand short declarative sentences by providing details and answers to question words (who, what, when, where, and why). Students share their work with their peers throughout the year.

CLASS II

The goal in Class II is to increase and expand reading fluency with an emphasis on non-fiction, poetry, and novels. Daily dictations help build a basic sense of sentence structure and provide practice in spelling rules and phonics. Vocabulary is studied in context. Creative and expository writing experiences encourage students to write freely and to further develop as readers and writers. Through The Writing Revolution exercises and activities, students learn to use graphic organizers to write more complex sentences and basic paragraphs. There are many opportunities for students to share their achievements with others.

CLASS III

In Class III, 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 by recognizing rules and patterns. Using the novels read in class, students practice reading habits such as summarization, identifying explicit and implicit ideas, and tracking character changes across the novel. Students also learn nonfiction reading skills, such as identifying the main

idea and note-taking. These skills are interdisciplinarily applied to research in both reading and social studies classes. The focus in English class is the solidification of basic grammatical skills in the context of longer, multi-paragraph written pieces. The students engage in the multiple steps of the writing process, which include planning, drafting, revising, editing, and publishing. They develop their skills by writing compositions in a variety of genres, including personal narrative, nonfiction, opinion, poetry, and correspondence.

CLASS IV

Class IV follows an ELA model for learning with the goal of fostering a love of reading and writing, helping students to see these two disciplines as intrinsically intertwined, and preparing them for Middle School. Expository and creative writing assignments, including poetry, are a regular part of the ELA program. Students learn to write and edit different kinds of paragraphs incorporating topic and concluding sentences. Students explore various types of figurative language to enhance their writing. They also continue their study of the writing process in which they learn how to collect ideas, plan, draft, revise, and edit a final draft. Classes across ELA use various novels to address the concepts of plot, setting, character development, figurative and symbolic language, and theme. The students build fluency along with comprehension skills. Students are pushed to develop their own claims about the novels, reinforced by textual evidence, leading to healthy debates and conversations around a text. Students in Class IV are also encouraged to build an independent reading practice through the use of nightly reading assignments. ELA classes address the explicit instruction of vocabulary, spelling, and grammar. Within our integrated ELA programming, students make use of the rich cultural offerings of New York City. Trips to the Metropolitan Museum, the Cooper Hewitt and Museum of the City of New York help bring our reading and writing to life in a variety of ways.

MATHEMATICS

Nightingale's 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 the Bridges in Mathematics curriculum, problem solving, and math in context, Nightingale's math program allows each Lower School student to access material through various entry points. Math is taught each day and it provides 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 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, number bonds, 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, nickels, 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 is also introduced.

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. Students also develop strategies for solving word problems. Place-value materials are used to model numbers to 1,000. Flexible and efficient strategies for problem solving are derived from student- and teacher-created models as problems increase in sophistication and numeric complexity. Careful attention is given to solidifying number sense and developing a conceptual understanding of multi-digit addition and subtraction. A variety of manipulatives 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 demonstrating 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 comprises 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. Our 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 Kindergarten Social Studies curriculum is on building an awareness of students' immediate environments, including identity, family, community, school, and traditions relating to different cultures. It is broken down into three seasons. In the fall, the focus is on identity and family, including an in-depth study on skin color. In the winter, students learn about the holidays of light with an emphasis on identifying the similarities and differences seen across cultures. Finally, in the spring, celebratory months of Black History (February), Women's History (March), and APIDA/Jewish History (May) are explored. Topics vary from year to year according to student interests. Museum trips and visits to other New York City points of interest broaden the scope of classroom activities. The Kindergarteners engage in a capstone project with a focus on recyclable materials and the environment. Many events throughout the year, including two visits from the Materials Classroom, a trip to the Museum of Art and Design, and a plant sale emphasized the importance of engaging with reusable materials to improve global warming and benefit our environment.

CLASS I

Class I studies and explores the different types of communities within and outside of the Schoolhouse. They begin 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 the 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, including a visit from two costume designers and a field trip to experience the Urasenke Tea Ceremony.

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. The curriculum is brought to life with 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 culture, 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. 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. After exposure to a range of changemakers

and social justice movements, the students identify influential individuals they are interested in researching. They utilize the library collection and digital resources to gather information about their chosen individual and the movement that they were a part of. Students practice note-taking skills and write an outline to craft a research paper. In addition, the students work with mentor teachers from across the school to create unique projects about their changemaker. Students may create dances, songs, picture books, or a myriad of other options. It's a wonderful way to end their Lower School experience. 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 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

Kindergarten students study scientific skills, climate studies, simple machines, and botany. The laboratory program focuses on observations, experiments, demonstrations, and recording. The students work on many hands-on activities as individuals and in small groups to develop organized and analytical thinking as well as problem-solving skills.

CLASS I

Students investigate the rock cycle, states of matter, and entomology. They begin recording their observations using more in-depth methods—such as illustrating, diagramming, tables, and graphs. Emphasis is placed on hands-on activities and learning how to utilize scientific terminology when articulating their observations.

CLASS II

Students explore magnetism, electricity, and hydrology concepts. Students refine their observation techniques as they continue to develop an understanding of the scientific process through hands-on experiments. Students begin formulating deeper questions and hypotheses from data gathered—either from previous experiments or past experiences.

CLASS III

Students focus on the growth, development and needs of plants and animals, the physics of forces involved in motion and the technological design of vehicles, the interconnectivity of natural ecosystems, and the power of conducting genuine 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 regularly leave the Schoolhouse and head into Central Park to make real world observations and conduct meaningful field experiments. Much of Class III science involves asking questions and developing ways to seek out the answers. Throughout the year, students are asked to use their observation and recording skills, develop and analyze data, use appropriate tools, create models, and apply scientific understanding.

CLASS IV

Students study the interactions between the Earth, the Sun, and the Moon, how these interactions affect life on Earth, how motion energy can move and change in a collision, and how animals use their senses to communicate. Class IV students are regularly asked to answer scientific questions by making claims that they can support with evidence in the form of scientific data and observations. Students have the opportunity to create and carry out scientific investigations and develop explanations about the world based on evidence discovered from their own work. Developing scientific understanding can be messy. It is in the sorting out of these messes that students take control and work towards finding greater meaning in the universe.

SPANISH

The Lower School Spanish Program is designed to build a foundation to inspire lifelong language learners. Language concepts are explored through a combination of engaging experiences inclusive of a variety of diverse learning styles which encourage active participation and risk taking. An emphasis on the study of the people and places where Spanish is spoken in the world are integral to the curriculum. Each year of study is centered around a particular country or region. Students are provided with multiple opportunities to enhance their reading, writing, listening and pronunciation skills during each class session, while learning about significant, authentic cultural themes and traditions.

In addition to their weekly Spanish classes, students also participate in a SING period as a whole grade, which is done in collaboration with the music department and offers additional exposure to music and the sounds of Spanish. Outside of the classroom, students use their language skills to connect with native speakers, both through a local partnership with the Carter Burden Senior Center in East Harlem, as well as with Lower Students at a school in Santiago, Chile. After several years of study, students

become comfortable using their language skills to ask questions, present information on a variety of topics, and connect with others in the context of real world situations.

KINDERGARTEN

The Kindergarten Spanish program is designed to develop students' language skills in the context of authentic situations that encourage active participation, personal interactions and multiple opportunities for oral expression. The Kindergarten 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

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 aligned closely with the Class I social studies curriculum, allowing for language concepts to be acquired in a meaningful context. The year-long Class I 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

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 aligned closely with the Class II social studies curriculum, allowing for language concepts to be acquired in a meaningful context. The year-long Class II 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

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 social studies curriculum, allowing for language concepts

to be acquired in a meaningful context. The year-long Class III 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

The Class IV Spanish program is designed to build upon the learning established in previous years of study, as well as prepare students to use their language skills to engage in real world experiences and develop meaningful relationships. While students explore various features of Chile, they learn poetry and write poems emphasizing the style of Chilean poet Pablo Neruda. Students have the opportunity to present their poems formally, as well as apply their language learning in a real context when visiting a local Senior Center. Additionally, Class IV students connect with Spanish speaking students from a Lower School located in Santiago, Chile. Multiple opportunities for speaking, reading, writing and presenting are offered to deepen their overall language development. Emphasis is placed on oral expression, while introductory grammar concepts are established to prepare students for continued study of the mechanics of language. Instilling a love of learning world languages in students and a lifelong interest in other cultures are both foundational elements of the Lower School Spanish program.

TECHNOLOGY

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

VISUAL ARTS

In Lower School Art, students learn to use different materials, processes, and techniques 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 a diverse range of artworks and artists, the development of art vocabulary, the application of new techniques, and experimenting with various materials, students learn to produce and interpret visual imagery with confidence and fluency. Projects encourage students to embrace mistakes and take creative risks, empowering them to discover their own solutions as they brainstorm, manipulate, and create work. Imagination, storytelling, and collaboration are fostered throughout the creative process.

KINDERGARTEN

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

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

In 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 Class III studio curriculum builds upon techniques and concepts introduced in previous grades while providing a wide spectrum of unique expression. Projects become multifaceted 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.

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. Acting in drama class serves many purposes: it is a means by which students develop social, emotional, physical, and intellectual capacities; in addition, it serves to create and preserve friendships, build problem-solving skills, and establish how to work together in a collaborative way.

CLASS III

A trimester course in Class III introduces students to drama skills. The primary purpose is to foster personality growth and facilitate learning to explore drama as an art form and use it as an approach to learning in other areas. In class, students use creative drama techniques to bring stories and characters to life. Students learn to work together by writing their own short plays, using storyboards, and presenting them at the end of the course.

MUSIC

Music instruction in the Lower School centers on active music-making; students sing, dance, and play instruments in every class. Through playfully scaffolded exploration, Lower School musicians learn to take risks, listen intently, collaborate, and trust their inherent musical instincts. Music

literacy and performance skills are taught sequentially using materials from all over the world, fostering global awareness in the classroom and developing the skills to meaningfully engage with both familiar and unfamiliar music. In addition to biweekly small-group music classes, each Lower School student participates in a SING period, where the entire grade comes together in the Black Box theater space. This class is used for whole-group singing and dancing, playing music games, sharing student work, integrating Spanish instruction, and developing performance repertoire outside of dedicated music class time. We welcome guest artists throughout the year at assemblies and in workshops with smaller groups of students. Recent guests have included Grupo Ribeiro, a Brazilian drum and dance ensemble, Flor de Toloache, New York's first all-female Mariachi band, Isaac Sawyer, beatmaker and hip hop artist and the House of Oricci, a Vogue freestyle dance house. Lower School students perform in concerts and special assemblies throughout the year, including the Lower School Winter Concert, Grandparents and Special Friends Visiting Day, and grade-level spring concerts. Students have the opportunity to study piano, violin, guitar or voice as part of our robust after school private lesson program.

KINDERGARTEN

In Kindergarten, music class centers on developing the essential musical skills of 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, using terminology related to 'musical opposites' to differentiate sounds that are fast/slow, high/low, long/short, speaking/singing, etc.

CLASS I

Class I musicians explore a range of pitched and unpitched percussion instruments from around the world, drawing connections based on instrument material and technique. They develop ensemble skills by singing rounds and playing instrumental ensembles in multiple parts. In the fall, Class I

students learn to read and compose with rhythms containing quarter notes, eighth notes, and quarter rests. In the spring, they learn the beginnings of staff notation through reading and simple three-note melodies and playing them on the xylophone.

CLASS II

Class II students expand their musical experiences through instrumental and vocal ensembles. Students continue to explore unpitched percussion in three-part drum ensembles and begin their unit of samba music. Class II students develop their melodic awareness through the immersion of games, songs, reading, and writing activities based on the five note pentatonic scale, while using solfège syllables and Curwen hand signs; they also learn how to read and identify half notes. Musical independence is developed through part-singing and playing increasingly complex arrangements for voice and Orff instruments (xylophones, glockenspiels, etc.).

CLASS III

In Class III, students study the fully expanded pentatonic scale, exploring major and minor modal qualities, and demonstrate their knowledge of these concepts through singing, movement exploration, and playing barred instruments with multiple parts. Class III students continue their studies of playing in a multi-part percussion ensemble, learn how to identify sixteenth notes, sing and play in triple meter, and learn how to play basic samba rhythms in an ensemble.

CLASS IV

In this capstone year, the 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. Students spend the year composing melodies and performing complex instrumental arrangements using all the pitches of the scale. As experienced Spanish speakers, they learn to play salsa, samba and cumbia rhythms and sing in both Spanish and English. Additionally, Class IV students receive a formal introduction to the three "tracks" offered to Middle School musicians—Music Composition, Strings (violin/viola/cello), and Guitar.

DANCE

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 classical, jazz, tap, modern, and contemporary 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.

KINDERGARTEN

Kindergarten students explore a variety of activities aimed at introducing young children to the world of dance. Through warm-up exercises and technical practice, students learn the fundamentals of ballet, jazz, and tap. This course emphasizes creative movement and self expression.

CLASS I

Class I students study the basics of tap dance, with a particular focus on rhythm, coordination, and musicality. In addition to developing technique and vocabulary, students gain flexibility, balance, and coordination. To encourage expression and creativity, students explore improvisation by developing their own rhythms and steps within a structured framework.

CLASS II

Class II students focus on beginning classical ballet technique, repertory, history, and culture through guided exercises, pantomimes, improvisations, and viewings. Students practice elementary ballet French language skills. Yearly repertory includes, but is not limited to, the Pyotr Ilyich Tchaikovsky/Marius Petipa/Lev Ivanov collaborations: Nutcracker (1892), Swan Lake (1895), and Sleeping Beauty (1890).

CLASS III

Students study the life and repertory of Isadora Duncan, one of the founders of American Modern Dance. Students practice exercises from her class material and learn dances

from the early 20th century. There is a special focus on Duncan's masterwork *The Many Faces of Love* (1910-1912). In addition to learning choreography, students improvise and create their own dance phrases in response to Duncan's.

CLASS IV

Students develop their modern dance practice with a focus on the life and work of Martha Graham. Students explore guided exercises, improvisations, viewings, readings, and discussion. Special attention is paid to collaboration, movement quality, musicality, gesture, and expressiveness. Yearly repertory includes Graham's *Lamentation* (1910), *Appalachian Spring* (1944), and *Maple Leaf Rag* (1990).

HEALTH

The Lower School Health program empowers Nightingale's youngest students to take good care of their minds, bodies, and relationships. Our Lower School classes introduce students to multiple dimensions of health; physical, social, and mental/emotional. Students develop health knowledge while learning and practicing the skills necessary to manage their personal health as they move through childhood. Through picture books, thoughtful discussions, games, and hands-on activities, students build confidence to keep themselves healthy and safe inside and outside of the Blue Doors.

KINDERGARTEN

Social and emotional well-being is fostered throughout students' days in the Schoolhouse. In Kindergarten, students become acquainted with the nurses' 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 focuses on the mind and body. Mindfulness is 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 take part in food and nutrition education, learning about food groups and eating a colorful plate. Students explore body diversity and appreciation, learn to communicate body boundaries, and identify and practice strategies for caring for their bodies in a variety of circumstances.

CLASS II

Class II focuses on physical, social, and mental/emotional health. Mindful thinking and behavior are reviewed and practiced throughout the semester. Class II students work on decision-making skills and identifying trusted adults, and they practice these skills with real-life health scenarios. Topics addressed include adopting a range of healthy behaviors, using medicine safely, human development, and family diversity.

CLASS III

Class III health builds 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. With a focus on physical, social, and mental health, students learn about topics including sleep, nutrition, puberty, and personal hygiene.

CLASS IV

Class IV health focuses on multiple aspects of health; physical, social, and mental/emotional. Topics include healthy communication in peer relationships, food and nutrition, identifying, managing, and communicating emotions in healthy ways, and nicotine/tobacco use prevention. Students learn about puberty and reproduction with plenty of time devoted to understanding periods and self-care during menstruation, maintaining a positive body image during puberty, and navigating friendships changes and challenges. Students take a personal safety course during which they develop skills to establish and communicate body boundaries and access support from trusted adults.

PHYSICAL EDUCATION

Nightingale's 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 functional 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 a week for half the year, 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. Additionally, teachers track students' progress from year to year using video and number assessments to ensure they are prepared for Middle School PE and Athletics by the completion of Lower School.

LIBRARY

The Lower School Library program 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. Students experience stories through print books, ebooks, poetry, creative play, art, and song. The Lower School 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 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.

VISUAL EDUCATION

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 artmaking activities.

COMMUNITY ENGAGEMENT

Community service has been a cornerstone of a Nightingale education since the school's founding over 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 help to organize food drives supported by the entire school. Class IV students visit the Carter Burden Center to share poetry and Spanish with the elders in their community center. Other Lower School projects have included designing, creating, and utilizing tools to clean up trash in Central Park, participating in the Upper School "Pillows for Paws" program, crafting enrichment items for animals in NYC shelters, and packing lunches at God's Love We Deliver.

HOBBYHORSE

Hobbyhorse is Nightingale's extended day after school program. Twelve to fifteen courses are offered at an additional fee each trimester. Classes may include: Chess; Coding; Cooking; DramaZone; Musical Theater; Ice Skating; Jump Rope; Knitting; Lacrosse; Make + Wonder Art; Outdoor Sports; Painting; Photography; Recycled Art; Robotics; Roller Skating; Sewing; Sketching and Drawing; The Craft Studio; Video; Yoga.



Middle School

2025-2026 CURRICULUM GUIDE

MIDDLE SCHOOL

Overview

The Middle School program addresses the specific 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. The Middle School at Nightingale is structured to allow for programming, curricula, and assemblies that meet the developmental needs of students across Classes V–VIII. Students are helped to grow and develop academically, as well as morally, emotionally, and socially. It is our goal to encourage each student to sample many kinds of activities, to learn where their real strengths and interests lie, and 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 classroom content. 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 study halls and the opportunity to enjoy supervised time on the rooftop playground and in the gymnasium, library, 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 in either a small group or one-on-one setting. As the primary liaisons between the student and 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 more formal social-emotional 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 justice and maintain an inclusive community.

Academics are complemented by a rich array of offerings in art, drama, and music, with a focus on creativity and self expression. The athletics program, which includes physical education and competitive team sports, promotes physical fitness, skill development, teamwork, and going beyond barriers. Student-led clubs and faculty-run challenge courses 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

Fostering a love of reading and building confidence in writing are key goals of the English program. Students read and discuss canonical and contemporary literature in a range of genres: novels, short stories, memoirs, essays, plays, and poems. They learn to read closely and to substantiate their analysis with details from the text. Literature is situated in its historical context and compared to other art forms. In addition to discussing literature, class time is devoted to writing instruction, with an emphasis on clear sentences, vivid expression, and the logical development of ideas. Students write about a range of topics in a variety of modes; creative writing is an integral part of the program.

CLASS V

In English V, students will read novels, short stories, and poems inspired by characters’ personal journeys. Together we discuss essential questions like: *How should we approach our changing world with empathy and understanding? Why is it important to step out of our comfort zone in order to grow?* Each unit culminates with an analytical paragraph in which students are guided through the process using an outline to organize thoughts and ideas before drafting. Students will learn how to write a topic sentence, supporting details, and a concluding sentence independently. We also offer many creative writing opportunities. This past year, students explored the story behind their name by writing about their name’s origin and creating original name plates in our Maker Space. Course texts may include: *Homeless Bird* by Gloria Whelan, *Dust of Eden* by Mariko Nagai, *Ghost* by Jason Reynolds, *Morning Girl* by Michael Dorris, *A Single Shard* by Linda Sue Park, and short story and poetry units.

CLASS VI

In Class VI English, students discover more about themselves and their world through active reading, analytical writing, and class discussion. Together, we tackle essential questions like: *What defines humanity? In what ways am I free? In what ways am I held back from being my fullest self?* We begin our class by

reading *A Place at the Table* by Saadia Faruqi and Laura Shovan, where students will discover the challenges and joys of cross-cultural friendship. This unit focuses on paragraph writing and evidence-gathering and ends in a Pakistani food festival, where students get a chance to sample some of the dishes described in the book. Next, students discover the importance of speaking truth to power while reading Julia Alvarez's *Before We Were Free*. In the spring, we begin our study of dystopian fiction with Lois Lowry's *The Giver*, and use this to launch us into conversations about freedom of thought, the importance of memory, and how a utopia can quickly dissolve into a dystopia. The year ends with a short science-fiction writing project.

CLASS VII

In English VII, students explore the complexities of identity and the challenges of coming of age by studying literature that encourages the transition from more concrete thinking about a text to deep analysis. Students read *The Outsiders* by S.E. Hinton, *The House on Mango Street* by Sandra Cisneros, *Animal Farm* by George Orwell, Shakespeare's *A Midsummer Night's Dream*, and a selection of short stories and poems. Through discussions, essays, and creative writing and projects, students unpack the nuances and larger themes of the literature, examining how characters evolve and what these changes reveal about society and their place in it. Students hone critical thinking and writing skills while fostering an understanding of personal and collective identity in a complex and rapidly changing world.

CLASS VIII

English VIII is a yearlong course designed to prepare students for Upper School. Students read texts across several genres (the novel, memoir, graphic narratives, and drama) as they explore the following essential questions: *How much of who we become is within our own control? How and to what extent do forces outside our control—including gender, race, class, language, neighborhood, school system, and family structure, as well as broader historical and political forces—shape who we become?* Course texts may include *The Poet X* by Elizabeth Acevedo, *This Boy's Life* by Tobias Wolff,

Born a Crime by Trevor Noah, *Persepolis* by Marjane Satrapi, *The Crucible* by Arthur Miller, and *Macbeth* by William Shakespeare. Students craft shorter memoir and literary analysis pieces in the fall as they prepare for a full writing workshop later in the year. They also work on creative projects and engage in an acting workshop that leads to a memorized scene performance.

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? How can we know what happened in the ancient past, and why do we want to know? What is civilization? What factors determine where and how early civilizations developed? What elements of early civilization can we observe around us today? Class V history students address these questions and others as they investigate early humans and multiple ancient civilizations, including Mesopotamia, Egypt, and China, ending the year in ancient Greece. They study prehistoric hunter gatherers, the Agricultural Revolution, and early river valley civilizations.

Class V historians learn to interpret maps and globes, and to identify and apply the major themes of geography (location, place, region, movement and human-environment interaction). As historians, students use primary and

secondary sources to compose a meaningful narrative of our ancient past, to ask complex questions about that past, and to identify and describe past-present connections. Even as they collaborate to construct coherent narratives of the past (and to locate their own identities in time and place), Class V history students are invited to challenge existing dominant narratives, particularly where the voices of those at the intersection of race and gender have been historically marginalized.

Students develop the skills of thinking and writing historically through close reading of nonfiction texts, scrutinizing primary sources and examining artifacts. As a specialized skill-set, writing historically requires that students learn to take organized notes, to paraphrase and summarize effectively, and to apply new vocabulary accurately. From there, students develop arguments within structured paragraphs and short essays; they have multiple opportunities to practice this genre of writing throughout the year.

CLASS VI

World Cultures and Geography

Expanding upon their prior knowledge of ancient history, Class VI history students build critical thinking competencies as they study imperial development in Medieval Africa, Europe and Asia through the lens of human and physical geography. Students interrogate the concept of empire and the centrality of religion and trade in the spread of empire across multiple world regions from about 500 CE to 1500 CE.

Students apply the themes and tools of geography with increasing expertise. And as they advance their geo-literacy skills, Class VI history students are asked to recognize and document the ways in which geography and culture shape each other over time. Some of the topics to be studied include: Ancient Rome and the rise and spread of Christianity; the Silk Road; Islamic Empire and Medieval Europe; Kingdoms of West Africa; and Feudal Japan. Students trace the origins and propagation of world religions and examine the religious diaspora that emerged over time.

Thinking historically and writing historically are competencies that reflect skillful use of primary sources to gather, interpret, corroborate, evaluate and synthesize information. Class VI history students engage in the practices of close reading, research proficiency, strategic note-taking and building specialized vocabulary. Students interact with a wide variety of sources (text, artifacts, multimedia, trips, projects, etc), representing diverse perspectives. They gain analytical writing experience by composing essays of increasing length and sophistication, and produce independent projects that reflect complex historical knowledge.

As historians, Class VI students are emboldened to challenge existing dominant narratives, and to consistently seek out and center historically marginalized voices. They are expected to formulate meaningful questions, to identify and appreciate contradictions; and to confront the complexities of our shared human past, all within a given geographic and historical context.

CLASS VII

Democracy, Civics, and Advocacy: U.S. History and Government to 1800

Class VII History focuses on the development of democratic institutions within the context of settler colonialism and the beginning of the United States Republic in the 17th and 18th centuries in North America. Building on the themes of Class VI, students consider the role of geography in human environment interactions among indigenous groups and the motives for migration, both voluntary and forced, to North America from the “Old World.” While acknowledging the limitations of democracy as it emerged in US history, we also focus on the ideals articulated in the founding documents, such as the Declaration of Independence, the Constitution, and the Bill of Rights, examining these within the historical context in which they were created and also as statements of principles that continue to deeply impact our lives. Throughout the course, students reflect on the meaning of civic participation and the mechanisms for change within our system and engage with concepts of inclusion, exclusion, power, and agency in history. They refine their close reading

skills, including extensive primary source analysis and source corroboration and begin to develop historians’ tools for constructing and assessing interpretations of the past. Analytical writing, research, note-taking, and public-speaking skills are also emphasized throughout the year.

CLASS VIII

How are America’s Founding Ideals Revealed in Historical Memory and Human Rights?

Class VIII American History is centered around two essential questions: To what extent has the United States fulfilled its promise of liberty, justice, and equality for all? What does it mean to memorialize, and what function do memorials serve for us as a nation? Anchored by the text assigned for summer reading, *Just Mercy: A True Story of the Fight for Justice* (Adapted for Young Adults) by Bryan Stevenson, our course begins with an examination of contemporary concepts of race, racism, and anti-racism in America, with particular attention to systems like voting rights/voter suppression and mass incarceration.

Through the application of historical thinking and writing skills (sourcing, corroborating, contextualizing), students work with evidence to formulate an account of the Reconstruction Era, which many scholars astutely refer to as America’s “Second Founding.” Our studies then take us chronologically and thematically through the Gilded Age and Progressive Era; Native American displacement and resistance; immigration; and industrialization and its repercussions. Students consider the extent to which New Deal policies and programs were truly inclusive. They apply research processes and critical thinking to study of the Holocaust and Japanese internment as they survey WWII, and then they proceed to the modern Civil Rights Movement (including lessons on the Black Power and Black Arts Movements). The Class VIII trip to Alabama takes students to Montgomery, Birmingham, and Selma, where they interact with historic Civil Rights landmarks, discover women’s central role in the movement, and use archives to do the work of historians. We explore two powerful new additions to the landscape: the National Memorial for Peace

and Justice and the affiliated Legacy Museum. Upon our return, students consider what factors determine an effective rights movement by analyzing campaigns inspired by the Civil Rights Movement: women’s rights, disability rights, gay and transgender rights, native rights and farmworkers’ rights. Finally, the course culminates in a major project in which students create structured (competitive) proposals for original memorials dedicated to self-selected, under-recognized individuals and organizations. This capstone merges scholarly research, analytical writing, creative design and presentation elements and brings together the entire Middle School to appreciate the exemplary proposals.

MATHEMATICS

At the Nightingale, we believe math should be seen as beautiful and complex. We value reasoning skills, complex conceptual and abstract thinking, decision-making, and curiosity as essential components of mathematical learning. We strive to create an inclusive learning environment that supports students with a wide range of backgrounds, experiences, and learning styles where our differences are opportunities for learning and growth. We believe in the importance of empowering our students to openly engage in productive struggle and actively strive for our students to be the problem finders and problem solvers of the next century.

Our Middle School Mathematics courses foster habits of mind that support long-term academic growth. Students are encouraged to approach challenges with persistence, think critically, reflect on how they learn best, and use technology purposefully. Emphasis is placed on developing independence – knowing when they’ve learned something, how to study effectively, and how to approach learning with calmness and joy. By the end of the year, students are not only mathematically prepared for more advanced coursework, but also equipped with the mindset and strategies of thoughtful, resilient learners.

Learning takes place through productive struggle, which we call rigor, where students are taught to adapt, evolve, and extend their level of understanding as they engage with progressively more complex and creative approaches to problem solving.

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

Math VI provides students with a strong foundation in mathematical reasoning, problem-solving, and conceptual understanding. The curriculum deepens students' understanding of key topics such as area and surface area, ratios and unit rates, decimal arithmetic, rational numbers, expressions and equations, and data analysis. Many of these concepts build on earlier exposure, allowing students to extend their skills and apply them in more complex ways. Through multiple representations—visual models, graphs, tables, and symbolic expressions—students engage in both real-world applications and abstract thinking. As they move from arithmetic toward algebra, they learn to generalize patterns, work flexibly with numbers, and articulate their reasoning with clarity and precision.

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 midpoint formulas, special right triangles, and an introduction to rational expressions.*

CLASS VIII

Algebra I

Algebra I builds on prior mathematical knowledge while preparing students for the abstract thinking of high school math. The curriculum extends students' understanding of linear and quadratic functions, systems of equations and inequalities, rational numbers, and data modeling. Many concepts, such as volume, functions, and expressions are familiar, but now explored through more sophisticated problems and representations. Students work across equations, graphs, tables, and verbal models to analyze patterns, solve problems, and model real-world scenarios. Emphasis is placed on reasoning through complexity, comparing mathematical structures, and clearly communicating one's thinking.

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.*

SCIENCE

Middle School science courses stress the development of laboratory skills, problem-solving, and an understanding and application of the scientific method.

CLASS V

The Science of Me

In this course, students learn about themselves as organisms made of matter and energy by studying the body as a system with parts that work together. 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 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 Class VI 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

Sustainable World

In Class VII science, through project-based learning and experimental design, students turn their focus outward to explore the environment around them. They develop skills that will allow them to build and live in a sustainable community. These scientific skills, which are needed to tackle real-world problems, are taught through collaborative work and experiential learning. Students have the opportunity to analyze authentic data, and in the process, explore the interaction between earth's hydrosphere, atmosphere, and geosphere with a focus on the three lenses of sustainability.

CLASS VIII

Sustainable World Part II

This course is a continuation of the study of scientific phenomena through the three lenses of sustainability. Students further develop analytical thinking, future thinking, and problem-solving skills while investigating real world problems. With a focus on climate change, energy resources, and our planet's oceans, students analyze scientific data to imagine possible solutions while opening their minds to diverse opinions and ideas. Throughout this course, students refine their laboratory, mathematical, collaboration, and communication skills.

MODERN LANGUAGES

Whether in French, Spanish, or Chinese, students in Classes V-VIII develop a foundation in the modern language of their choice over their years in the Middle School. Conducted primarily in the target language, language classes rapidly introduce a broad range of grammar and vocabulary, while emphasizing communicative and intercultural skills. Students in French and Spanish progress through multiple verb tenses each year, while students in Chinese learn how to read and write several hundred new characters in each level. Beginning classes are offered for students coming into the Middle School without a prior foreign language background, while those students coming from Nightingale's Lower School Spanish program, as well as those who have studied French or Chinese previously, are placed in appropriate classes for their level.

FRENCH/SPANISH

CLASS V

French and Spanish courses are taught almost exclusively in the target language. Students learn to spell and ask for and follow 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. This is acquired over several years of sustained

study. 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 learn 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.

CLASS VI

With a continued emphasis on oral and written communication, Middle School Intermediate students acquire more regular and irregular verbs and use them to narrate in the present, near future, recent past, preterite, 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.

CLASS VII

Students at this level learn to distinguish between the use of the imperfect versus the preterite, 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 studied covers 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.

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

CLASS V / CLASS 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. While 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.

CLASSICS

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. In addition, there are separate entry-tracks in both Class VII and Class VIII for students new to Nightingale without prior knowledge of Latin.

CLASS VI

After a brief introduction to the history and development of the Latin language, Latin pronunciation, and some basic vocabulary and useful expressions, students begin 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 seventh grade 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.

LEARNING SKILLS

The Learning Resources Department appreciates the diversity of learning styles in Middle School and is dedicated to meeting each child's learning needs. Beginning in Class V, learning specialists teach all students how to meet the expectations of an increasingly demanding curriculum. Throughout the Middle School experience, they support the students' academic growth—both in small groups and individually—as they mature into proficient self-advocates who are resilient, meta-cognitive, and strategic learners. As needed, learning specialists work closely with students, deans, and classroom teachers as well as parents and outside services.

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. Beginning in the 2025-2026 school year, Class V students also have an opportunity to deepen both their Literacy and Math skills through differentiated small group instruction that allows for remediation, additional support, extension, and added challenge where needed.

CLASS VI - CLASS VIII

In small groups, students with a Latin exemption learn strategies for study skill 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

The Middle School computer science curriculum cultivates computational thinking, problem-solving skills, and digital literacy. Students build their programming, robotics, design, and foundational technology skills. The program integrates hands-on projects that explore physical computing and game design, encouraging creativity and technical proficiency. By the end of Middle School, students are well-prepared for advanced computer science studies, equipped with a solid understanding of programming concepts and how they can be responsible digital citizens.

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, examine the basics of engineering and robotics, and develop image- and video-editing skills.

CLASS VI

Students continue developing their programming skills using block-coding platforms and microcontrollers. Students learn about circuitry and its relationship to physical computing. Students also explore elements of game design and program interactive games. Digital citizenship instruction includes a focus on digital footprint and social media.

CLASS VII

Students continue building their programming skills through an introduction to text-based coding and robotics. Students conduct an in-depth study of 3D design, exploring the design thinking process as they learn how to use 3D modeling applications. Digital citizenship instruction focuses on social media, data mining, and cyberbullying.

CLASS VIII

Introduction to Programming

In this course, students are introduced to universal programming concepts and strategies. Students explore the Python coding language, p5js, and physical computing. At all stages in the course, students engage in debugging and computational exercises designed to prepare them for more advanced programming experiences.

HEALTH EDUCATION

Middle School health education supports students as they navigate early adolescence. Students focus on learning about and caring for their physical, mental, and social well-being. To best support students through the Middle School years and ultimately prepare them for Upper School, developing healthy communication and decision-making skills are at the forefront of the classroom experience. In addition to health education in the classroom, students in Classes VI and VIII take a personal safety course during which they practice verbal and physical self-defense skills.

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 preadolescents. 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 delve further into issues of early adolescence. Decision-making, communication, and media literacy skills are 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 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. With the goal of taking increased responsibility for their personal health in preparation for their Upper School experience, students explore adolescent health issues 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 ART

The Middle School offers a wide variety of art courses, including 2D and 3D Art, Photography, Ceramics, Painting, Digital Imaging, Printmaking, and “Art Beyond the Museum, Everywhere and for Everyone.” In Class V,

the school year is divided into quarters as students rotate through four 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, Printmaking

In Ceramics, students focus on hand-building techniques. As they gain technical skills, they 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. Students learn about perspective drawing by creating a 2-point perspective cityscape and will approach painting with inspiration from surrealism.

In Printmaking, students learn a range of printmaking methods and techniques for creating visual work through these methods. The course explores the mixing of print media and how they interact with other media. Students will focus on collage, drawing, painting, and bookmaking while exploring their personal styles through the wide range of assigned projects.

CLASS VI

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

In Design Principles, students apply the principles and elements of design in both two and three-dimensional materials. Line, color, shape, value, texture, form, and space are explored in drawing, painting, and sculpture. New techniques and materials are introduced throughout the semester.

In Photography, students begin using 35mm film cameras, working in black and white. Concentrating on framing and composition, they learn to process their own film and master basic printing techniques.

CLASS VII

Ceramics, Drawing and Mixed Media

In Ceramics, students focus on ceramic processes, methods, and materials. They have the opportunity to continue to build upon both hand-building skills and techniques, as well as utilizing the potter's wheel to create their work.

In Mixed Media, students learn the technical skills to bring realism to their artwork. Working from a grid to create an enlargement and using charcoal to render value, students gain confidence in their ability to render the world around them. For our final project we focus on identity and creating a visual narrative on the canvas using mixed media. Students have the opportunity to display their work and engage in classroom critiques.

CLASS VIII

Drawing and Painting, Digital Imagery

Class VIII Drawing and Painting focuses on the production of 2D work and the development of skills of mark-making, tone, and visual representation. Mentor pieces are used as guides and inspiration for deep exploration, analysis, and reflection.

The Class VIII Digital Imagery 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.

PERFORMING ARTS

Nightingale recognizes the value of exploring personal creativity through artistic expression. Through Dance, Drama, and Music, students learn the power of using their whole self – body, mind, and spirit – to represent the human experience. In doing so, our artists make connections with each other, their learning in other classes, and with the greater world.

DRAMA

The drama classes in Middle School foster personality growth and facilitate learning. Students explore drama as an art form and use it as an approach to learning in other areas. Drama class provides a safe environment for students to engage their imagination in a theatrical environment. Students learn the meaning of working together in a group and the love of performing with others. It enables them to see the world from different perspectives. By performing plays, it helps students to understand people, places, periods of history, and issues that might be unfamiliar to them. Being in a show is more than just memorizing lines — it helps students to identify and amplify what's important in a story and to connect with others around them.

CLASS V

Students in Class V take a trimester of drama and start to learn to work together as a group by performing a small play for their parents and the Middle School.

CLASS VI

Students in Class VI take a semester of drama in which they begin to work on different scenes, plays, and dive deeper into character study. A full scale musical is presented in the fall in collaboration with students from Allen-Stevenson

CLASS VII

Class VII students may choose to perform in a dramatic production presented each spring with students from the Allen-Stevenson School. As an introduction to the Upper School, Class VII and VIII students may participate in our Upper School spring musical.

CLASS VIII

Class VIII students are invited to participate in the Upper School play in the fall. As an introduction to the Upper School, Class VII and VIII students may participate in our Upper School spring musical.

MUSIC

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 Music 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 Director of Performing Arts about transferring tracks.

MUSIC 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 songs (Class VI), film music (Class VII), and musical theater (Class VIII). The Middle School experience culminates in a workshop production of the original Class VIII musical that features students from music composition, dance, strings, and theatre in a Performing Arts Capstone project.

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

Strings 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. Strings students learn the fundamentals of ensemble playing and have frequent opportunities to write and perform original instrumental compositions. Private individual instruction in voice, guitar, piano, violin, viola, and cello is available for an additional charge.

PERFORMING ENSEMBLES

CLASS V

In addition to following the Strings, Guitar, or Music Composition tracks, all students in Class V sing in the Class V Chorus, where they continue 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 at special assemblies and events throughout the school year.

CLASS VI - VIII

In addition to their chosen Music track, students in Classes VI–VIII may choose to participate in one of three optional performing ensembles, which allow them to develop their performing and ensemble skills in specialized mixed-grade groups. All ensembles meet within the school day during designated class periods. The performing ensembles available to students in Classes VI–VIII include Middle School Chorus, Middle School Drumming Ensemble, and Middle School Strings Ensemble.

DANCE

Dance for Classes VI–VIII offers a comprehensive study of choreographic composition alongside an exploration of various dance styles and techniques, aimed at enhancing creativity, critical thinking, and technical skill development. In Class VI, students begin by focusing on the foundational elements of choreography—space, time, dynamics, and relationships—through movement explorations, improvisation, and composition exercises. As they progress through Classes VII–VIII, students delve into a wide range of dance styles, including ballet, jazz, modern, contemporary, musical theatre and hip hop, refining their ability to make artistic choices and enhance their technical, performative, and interpretive skills. With an emphasis on collaboration and personal reflection, these courses encourage students to expand their movement vocabulary, gain a deeper understanding of the historical and cultural contexts of various dance styles, and apply these skills to their Capstone projects, ultimately fostering growth in both technique and artistic development.

CLASS V

Students study elements of contemporary dance, including jazz, modern, and ballet. Special attention is given to improvisation. Students create short dance studies that are shared in class.

CLASS VI

Students deep dive into the world of jazz dance and its many forms. Students engage in an aerobic warm up and across-the-floor work and learn essential jazz phrases and combinations. In addition, students begin to focus on the foundational elements of choreography—space, time, dynamics, and relationships—through movement explorations, improvisation, and composition exercises.

CLASS VII - 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.

PHYSICAL EDUCATION

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 to 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, Squash (Class VII/VIII only), 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.

Class V/VI Athletics is all about developing skills, learning what it means to be a student-athlete, and developing a love for athletics and team culture. Our V/VI teams develop skills in a fun and competitive environment, while learning how to compete with other schools in our league. Teams participate in up to four “Jamborees” per season, which are round-robin style competitions. During these Jamborees, students not only learn how to put their skills to the test in a competitive setting, but learn how to be great teammates—supporting their fellow Nighthawks on the sidelines as well as within gameplay.

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 (HIIT), 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.

In Class VII/VIII Athletics, students use the skills they develop at the V/VI level and learn how to strategize towards winning as a team. When numbers allow, we form “A” and “B” teams to allow students to compete at their appropriate level. Class VII/VIII teams have a full competition schedule against schools in and out of our league and learn and embrace their unique roles on their teams to ultimately contribute to team success. Our VII/VIII Athletics program prepares students to compete at the Varsity level.

LIBRARY

The Middle School library program builds on the foundational skills developed in the Lower School. 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. The program aims to provide students with a strong foundation in information literacy competencies to support them on their academic journeys here at Nightingale and beyond the classroom.

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. Curated research guides, or LibGuides, provide in-school and remote access to the online catalog as well as an extensive range of databases and 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 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. 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.

TRIPS

Nightingale believes in the importance of outside-of-the-classroom learning experiences. Trips are offered at each grade level and are led by grade-level teachers, advisors, and class deans and supported by our Director of Global and Civic Engagement and our Director of Museum Education and Cultural Partnerships. All classes take an overnight trip to build community within their class as well as day trips that accentuate what they are learning in the classroom. The Class VII and VIII trips are connected to the history curriculum. Traditionally, full-class trips include:

CLASS V

A series of trips throughout the year as part of their Journey Curriculum. They visit museums up and down Museum Mile (including the Jewish Museum, Cooper Hewitt, and El Museo del Barrio). At each museum, students contemplate journeys—physical, emotional, metaphorical, through lessons with our Visual Education Coordinator and staff from the museum.

CLASS VI

Throughout the year students take part in day trips integrated into the curriculum.

CLASS VII

Washington, DC (overnight): As part of learning about the systems of government, in history classes, students visit several important buildings and memorials for an immersive and interactive experience in our nation's capital.

CLASS VIII

Alabama (overnight): Traveling from Montgomery through Selma to Birmingham, students meet local civil rights activists who share their experiences at locations critical to the movement, culminating in a full day at the National Memorial for Peace and Justice and the Legacy Museum.

EXTRACURRICULAR OPPORTUNITIES

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.

Other Middle School extracurricular offerings include the following:

- Theater Productions, Classes VI-VIII (referenced above)
- Athletic teams, Classes V-VIII (referenced above)
- Out of Uniform (MS literary magazine)

- Student government: Middle School co-presidents and class representatives to the Arts Board, Community Engagement Board, Environmental Board, Inclusivity Board, and Athletic Board (Blue/Silver)
- Community service projects at each grade level
- Debate (tournament team and club)
- Sweet Readers, Class VI
- Performing Ensembles, Classes VI-VIII
- Middle School Clubs: Previous clubs offerings have included: Current Events 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

Middle School 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 Halls, Library.

THINKERY

Middle School students have the option to participate in Thinkery on Mondays through Fridays from 3:20 until 6:00 p.m. Thinkery is a place for students to be after school to study, think, connect, and play.

Under the supervision of the Director of Thinkery and Thinkery staff, students attending Thinkery are given the time and space to finish their homework, study, and prepare for assessments and receive academic and organizational support as well as content-specific support from Upper School peer tutors and teachers. In addition to supporting students academically, Thinkery also offers opportunities for students to engage in creative play and enriching activities

and to expand their horizons through its monthly lecture series called “Thinkery Lectures”, which have ranged from neuroscience to distance hiking to the science of vaccines to music composition.

Students who participate in Nightingale sports or have other after-school activities may join Thinkery any time before 6:00 p.m.



Upper School

2025-2026 CURRICULUM GUIDE

UPPER SCHOOL

Overview

The Upper School curriculum reflects our belief that a well-rounded liberal arts education, adapted to the modern world, is the best preparation for college and a lifetime of learning. Students establish solid foundations in our Grades IX and X Core curriculum (English, mathematics, history, science, and at least one world language), and then take advantage of our wide selection of offerings that enable students to pursue their interests and build on their strengths to engage in deeper, collaborative, and meaningful learning.

To enrich our students' experience in the Upper School, students have the option of continuing on in our exceptional liberal arts program or exploring their particular curricular interests by applying to one of our innovative STEM or Global Pathways. At the end of sophomore year, students have the ability to apply to a pathway and tailor their learning experience for Junior and Senior years with targeted coursework and research opportunities that further their knowledge of systems and enhances their critical thinking skills. Students who complete either pathway program will have an additional designation on their transcript highlighting their completion of the program, an acknowledgement of their academic achievement in their chosen area of focus.

No matter what path a student chooses in the Upper School at Nightingale, they are expected to complete twenty major courses during their high school career. Students generally take five majors

each semester with the option (but not requirement) to take six majors. Additionally, specific minor and major courses are required for graduation (see "Required Minors" on the following page).

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

- Majors meet seven times per cycle.
- Minors meet three or fewer times per cycle.

Within this Curriculum Guide, an **M** following the course name indicates that a specific course is a minor. All courses without that designation are majors.

Exceptions to these graduation requirements may only be made at the discretion of the Head and Associate Head of Upper School. Please refer to the Upper School Handbook for additional information.

PLEASE NOTE: Not all courses listed in the Curriculum Guide will be offered every year. Please consult the course registration sheet for more information regarding course availability.

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 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:** 3 courses
Senior Capstone: Spring semester of senior year | **Community Engagement:** 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 Power and Patriarchy: Who Made the Rules?, Class X Leadership, Class XI Public Speaking, and Class XII Financial Literacy Seminar*

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

As of the 2023-2024 school year, any class taken outside of Nightingale, with the exception of courses taken at approved semester or year away programs, will not count towards graduation requirements or prerequisites.

UPPER SCHOOL

By Area of Study

BEYOND BARRIERS

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

CLASS IX

Power and Patriarchy: Who Made the Rules? M

Why teach leadership to sophomores at a girls' school? Four reasons: Number one: it teaches students that leadership is accessible to everyone and is merely a set of behaviors that can be learned. Number two: it teaches adolescents how they can move from problem to progress. Number three: it heightens self-knowledge. Number four: it helps sophomores see themselves differently. And if you can see it, you can be it! The 2025/26 seminar will have a particular focus on promoting principles of kind leadership in partnership with the Riley's Way Foundation.

CLASS X

Leadership M

Why teach leadership to sophomores at a girls' school? Four reasons: Number one: it teaches students that leadership is accessible to everyone and is merely a set of behaviors that can be learned. Number two: it teaches adolescents how they can move from problem to progress. Number three: it heightens self-knowledge. Number four: it helps sophomores see themselves differently. And if you can see it, you can be it! The 2025/26 seminar will have a particular focus on promoting principles of kind leadership in partnership with the Riley's Way Foundation.

CLASS XI

Public Speaking M

Speaking in public is about more than just volume, pacing, tone, and stance. Ultimately, a good public speaker is someone who is confident in themselves and enthusiastic about what they're saying. In this class, through the development and delivery of a variety of speeches, students will not only learn the basics of rhetoric and effective speaking strategies, but they will also develop their sense of confidence by uncovering their authentic voice and unique sense of humor. After one semester of Public Speaking, students may actually find speaking in front of a crowd to be fun and freeing.

CLASS XII

Senior Financial Literacy Seminar M

As seniors begin to transition from adolescence to adulthood, this course will focus on developing a variety of financial skills including, but not limited to, personal financial management, budgeting, and investing. Students will develop a basic understanding and knowledge of the effective use of these skills for their personal and professional journeys.

CLASS X DIGITAL DESIGN SEQUENCE

Nightingale's Digital Design Sequence is a requirement for Class X students, who must choose two of the following semester-long courses.

Design and Digital Fabrication M

This semester-long course is an elected part of Class X's required Arts and Digital Design sequence. In this course, students learn how to apply various tools and technologies to prototype and develop their own innovations and re-imaginings with 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.

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.

Introduction to Art History M

Exploring selected themes in art, students 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.

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.

PATHWAYS

Pathways is a bold re-imagining of the Upper School experience designed to make learning more relevant, interdisciplinary, and student-centered. At its core is the belief that education must reflect the interconnectedness of the world students are preparing to enter. Beginning in Grade IX, all students will participate in a common, rigorous two-year core curriculum that emphasizes academic exploration. This foundational period fosters essential competencies—critical thinking, communication, collaboration, and curiosity—and provides students with the space to explore minors and build the skills and confidence needed for deeper work in Grades XI and XII.

At the end of Grade X, students desiring a specific academic challenge and level of inquiry can apply for a personalized academic focus area, or *Pathway*, which aligns their coursework, travel, research, and real-world experiences with their interests. The two initial Pathways include STEM and Global Studies. Each Pathway offers a curriculum map with recommended courses, global experiences, culminating with the required *Senior Capstone*—a semester-long research, design, or impact-driven initiative supported by writing, deep analysis, knowledge creation, and public speaking. Importantly, Pathways are not rigid tracks; they are flexible frameworks that allow students to make

interdisciplinary connections and pivot as their interests evolve in consultation with faculty and college counselors. Aligning core skill development with authentic exploration and intentional mentorship empowers students to shape a cohesive, self-driven academic narrative about who they are, their intellectual interests, and how they hope to engage with the world. As one leader put it, “*Pathways* is not simply a program; it is a vision for what transformative education can be.”

STEM SCHOLAR PATHWAY:

There are two separate STEM pathways that students can choose:

- Independent Science Research Program (ISRP) - Lab-Based Focus
- Math & Computer Science Focus

STEM ISRP Pathway Requirements:

- Complete Grades IX & X Core classes
- Application and Acceptance to ISRP and STEM Pathway
- Science Seminar **M** in Class XI and Class XII
- Biotechnology in Class XI Spring
- STEM Summer Internship Between Class XI and Class XII
- Triple-Up on STEM Classes all four semesters of Class XI and Class XII
- Membership in a STEM Club
- Peer tutor in a STEM field
- Senior Capstone focused on ISRP internship work

STEM Math & Computer Science Pathway Requirements:

- Complete Grades IX & X Core classes
- Application and Acceptance to STEM Pathway
- STEM Seminar **M** in Class XI and Class XII
- Advanced Robotics & Engineering
- Triple-Up on STEM Classes all four semesters of Class XI and Class XII
- Membership in a STEM Club
- Peer tutor in Math or Computer Science
- Senior Capstone focused on Math or Computer Science

GLOBAL SCHOLAR PATHWAY:

The pathway is a combination of required classroom coursework (with key demonstrations of learning) and experiential learning requirements.

Global Scholar Pathway Requirements:

- Class IX and Class X Core classes
- Application and Acceptance to the Global Pathway
- Global Education Seminar **M** in Class XI and Class XII (two semesters each year).
- Reflections and demonstrations of learning of the five global competencies each year, across multiple experiences. (Through Global Education Seminar)
- Four years of a modern language
- Three History electives with a global focus
- Two English electives with a global focus
- Senior Capstone on an issue of global significance

SENIOR CAPSTONE PROJECT

The Senior Capstone is a semester-long, interdisciplinary, student-centered course that empowers Class XII students to pursue a topic of personal interest through in-depth, independent research. Under the mentorship of a faculty section leader, students work in small cohort groups that foster seminar-style learning and help build a community of shared purpose and support. Section leaders empower students to ask big questions and design original work. While projects can take many forms, from traditional research papers to performances, product prototypes, or portfolios, all include authentic research and a written component that helps students contextualize their work within a broader field of inquiry.

Through this course, which takes place in the spring of Class XII students strengthen essential academic and real-world skills—including research and inquiry, critical thinking, time management, self-direction, and the art of giving and receiving constructive feedback. They must exhibit strong

organizational skills and the capacity to adapt to changing circumstances. Each Capstone project culminates in a comprehensive research paper and a formal presentation delivered at a school-wide colloquium. This public presentation allows students to communicate their ideas clearly and confidently, demonstrating both subject mastery and dynamic presentation skills. This transformative learning experience highlights students' growth and preparedness for the next stage of their academic and personal journeys.

ENGLISH

The English program centers on the exposure to a diverse array of literature, the study of character, the analysis of text, and the deep investigation of language and meaning. Students are asked to engage with important ideas, to listen actively to and respond to their classmates, and consider different, often contradictory perspectives. Ultimately, the work of the English classroom is to learn to write - cogently, intentionally, powerfully, and effectively, and in doing so, to learn to think critically, to question assumptions, to evaluate arguments, identify biases, and synthesize information from different sources. Throughout the course of their Upper School trajectory, English students have ample opportunity to reflect on their work, incorporate feedback from their teachers and classmates, develop comfort with nuance and ambiguity, and find joy in reading, writing, and the discussion of both.

CLASS IX

English CORE IX

In English 9, students learn to read and write with curiosity and precision. Students read a variety of texts, including Jacqueline Woodson's *Red at the Bone*, J.D. Salinger's *The Catcher in the Rye*, Ali Smith's *Girl meets boy*, Shakespeare's *Romeo and Juliet*, Gish Jen's *Typical American*, and Moisés Kaufman's *The Laramie Project*. Each text disrupts what Chimamanda Ngozi Adichie calls "the danger of a single story," a concept that informs our discussions and writing

assignments throughout the year. Students identify how and why our understanding of ourselves and our world is enriched when we have access to a variety of stories and storytellers. A sonnet unit, focusing on Shakespearean and contemporary sonnets, introduces students to the poetic form and gives students an opportunity to create their own original sonnet. Assessments include analytical and imaginative writing assignments, weekly reading comprehension exercises, and creative projects that students can approach independently or collaboratively. Students engage in an intensive study of English grammar and usage rooted in a study of *The Beauty of the System*, a comprehensive guide to improving students' written and oral communication in Standard English, authored by our department's own Brad Whitehurst.

CLASS X

English CORE X

In English X, students read a variety of texts that deal with the theme of transformation. Beginning with Tara Westover's *Educated*, students consider what prompts some people to change from one state to another, whether outwardly in the shape of their lives, or inwardly in their thoughts and feelings. Discussing *Educated* also encourages students to contemplate what the purpose of an education is. This course includes texts of different genres; students read plays (*A Doll's House* by Henrik Ibsen and *Metamorphoses* by Mary Zimmerman), novels (*The Great Gatsby* by F. Scott Fitzgerald and *Their Eyes Were Watching God* by Zora Neale Hurston), memoirs (*Night* by Elie Wiesel and *Narrative of the Life of Frederick Douglass*) and selected Romantic poetry. Students learn to read critically and to develop nuanced analytical arguments. They also complete several creative assignments, including a short story and a personal essay.

CLASSES XI AND XII

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

English XI

English XI is built around a distinctive genre: the personal essay. In this one-semester course, students explore their unique relationship to language and narrative. Students explore the following essential questions: As an essayist, what do I have to say, and what are my options for saying it? How have writers over the years used essays to explore their own thinking, and how can their examples be used as models for my own writing? How can I use the resources of fiction (anecdote, dialogue, scene-setting description, etc.) and poetry (selective word choice, figurative language, etc.) to expand my options in the personal essay genre? Students read both classic and contemporary essays and have time to workshop their work in class. The course culminates in a unit on mid-century and contemporary confessional poetry, an opportunity for students to see how language can be distilled even further.

English XII

In English XII, students learn to contribute to vital conversations about identity and citizenship in a perceptive and imaginative manner. Students read "*Brokeback Mountain*" by Annie Proulx (and watch the film adaptation), *As I Lay Dying* by William Faulkner, *Citizen* by Claudia Rankine, *Sweat* by Lynn Nottage, and selected poems by Emily Dickinson. These works differ considerably both in genre and in ostensible subject matter. They are, however, all American texts that converge on the theme around which the course is built: unmet needs. Students consider how characters facing different circumstances respond to those needs (and at what cost). We consider how we—as readers, writers, and citizens—might negotiate our own needs with those of others. To what extent can people with different needs and experiences find a shared sense of reality? Written assessments are both analytical and creative in nature.

SPRING ELECTIVES

Bible as Literature

Non-religious in approach, this course is designed for all students—whether Bat Mitzvahs or confirmands, atheists or agnostics. The number-one bestseller of all time, the Bible is first of all an anthology of ancient literature, so we will read it in its historical context. We will explore the Good Book's great literary diversity—from myth to history, from prophecy to poetry, from epistles to eyewitness accounts—and students will write their own creation myths, psalms, gospel accounts, and letters to the faithful. We also will explore ways that artists have depicted Bible stories over the centuries. At the end of the term, each student will select one biblical painting in the Metropolitan Museum of Art for a final interdisciplinary project.

Page to Screen

So many of today's most beloved films draw inspiration from literature. Most Americans spend far more free time watching screens than reading, and we can now watch films on our phones via streaming platforms and during binge-watching sessions. What is the appeal of adaptations? What makes an adaptation effective? We'll start by framing the questions filmmakers think about when they adapt literature to film, and we'll build our own visual literacy skills (including editing, sound design, cinematography, *mise en scène*). Then, we will examine a variety of literary texts and film adaptations, including cinematic classics (Akira Kurosawa's *Rashomon*, based on Ryunosuke Akutagawa's short stories), more recent blockbusters (Denis Villeneuve's *Arrival*, based on Ted Chiang's "Story of Your Life"), and radical reimaginings (the Coen brothers' *O Brother, Where Art Thou?* as a reimagining of Homer's *Odyssey*). Along the way, you'll have the chance to begin writing your own original adaptation and to teach to your peers an already-existing adaptation you're passionate about.

Art of the Short Story

In our internet age, when our attention seems constantly divided, the short story—which demands a mastery of

precision, pacing and voice—can provide both a window into literary history and a bite-size jolt of pleasure. We'll start with Russian masters Gogol and Chekhov and move through experiments in modernism to the realism of Flannery O'Connor, James Baldwin, and Raymond Carver. Then we'll turn to contemporary stories in a range of styles, from authors such as George Saunders, ZZ Packer, Jhumpa Lahiri, Maile Meloy, and Yiyun Li. We'll also look at interviews with writers to learn about their process and gain an appreciation of craft. Ultimately, students will try their hand at their own original pieces.

World Literature

Reading a country's literature provides a crucial insight into its cultural and imaginative life. In our interconnected world, this is more important than ever. In this course, the central theme of which is bridging gaps, we will read writers from around the world. Authors may include Gustave Flaubert, Franz Kafka, Chinua Achebe, Virginia Woolf, Clarice Lispector, Kazuo Ishiguro, Nadine Gordimer, Rohinton Mistry, Kenzaburō Ōe, and Amos Oz. The course will culminate in a unit on portrayals of globalization. We may discuss the cosmopolitans one encounters in the work of Yiyun Li, Roberto Bolaño, Samanta Schweblin, Chimamanda Adichie, and Haruki Murakami. Students will have the opportunity to do both analytical and creative work in which they consider how cultural context informs literature and vice versa.

Misfits and Monsters

Everyone loves a good villain – a thoroughly unsavory character whom we are permitted, even invited, to loath utterly. Fictional worlds that draw clear lines between good and evil make it easy for us to stigmatize or demonize what we perceive as different from ourselves. But fictional worlds that are not so black-and-white, but include ambiguous shades of gray, may be more difficult to negotiate. How does one tell the good guys from the bad, especially when the drifters, misfits, ne'er-do-wells, evildoers – and even the monsters – appear to be not so very different from ourselves?

Heroines

What does heroism look like in literature? Is it determined by characters' actions—whether they overcome obstacles, endure difficult times, or undergo personal growth? Or is it an innate quality reflected in how characters choose to live their lives? Is heroism even possible for fictional characters in our modern era? How might heroism differ when the protagonists are women? This semester course will explore these questions as they play out in several major works of fiction, most of them written by women about women. Authors may include Jane Austen, Virginia Woolf, Edith Wharton, and Toni Morrison.

ENGLISH MINORS

CLASSES XI AND XII

Philosophical Inquiry into Our World **M**

Philosophy as an academic discipline can be esoteric, if not alienating, but we're all philosophers at heart. In this minor, we'll try to reignite the spark of wonder and curiosity we all had as children. What are you wondering about most these days, and what do you most want to discuss in community with others? We'll generate the course agenda and questions together, immerse ourselves in sources that deepen our thinking, and work on making meaning (and, just as importantly, becoming more confused) together. We'll prioritize questions wholly based on your interests, but here are some questions that have come up in the past: What constitutes success? Can time be "wasted"? How might AI impact our understanding of companionship and connection? What do you think happens after you die, and how does that affect how you live your life? Does society need hierarchies to function? This course is only for students in grades 11 and 12. This course may be taken in the fall semester, spring semester, or both semesters, since the questions we'll take on each semester will be different.

CLASSES X-XII

Creative Writing M

In Creative Writing, a one-semester elective minor course, students read select works of literature and literary criticism, regularly hear from visiting authors, and workshop their own writing via peer-review, receiving feedback on the final version from the instructor. Students gain increased familiarity with literary terminology, how to evaluate and respond to each other's work in a workshop setting, and the landscape of contemporary poetry and fiction. Each student is responsible for generating and revising a body of creative work throughout the course of the semester.

HISTORY

In the History Department, Nightingale students explore diverse human systems of the past and present, seeking enduring understandings and inspiration for the lives they will lead in an interconnected, twenty-first century world. Our classes center human ingenuity and social transformation alongside the barriers that have stymied freedom and flourishing. Dynamic class discussions, varied readings, and an inquiry-based research program equip every Nightingale student with powerful tools for lifelong learning. By analyzing primary sources, scholarship, maps, and quantitative data from divergent perspectives, we lay bare the contested process of building narratives, empowering our students to become critical consumers and creators of knowledge, as well as meaningfully engaged citizens. Our students build capacity to act with keen analytical insight, empathy, and resilience as they develop community and design impactful lives within and beyond the Blue Doors. Throughout, we focus on developing the skills of historical thinking, inquiry-based learning and research, communication, and civil discourse.

CLASS IX

Global History 1

From the fourteenth through the late eighteenth centuries,

the world was transformed by statebuilding, religious and political conflict, trade, innovation, and increased interconnection. In this course, students explore some of these transformations as they occurred in Africa, Asia, Europe, Latin America, and the Islamic world. Selected topics covered include the Indian Ocean trade networks; cultural flourishing and political change in Ming China; the Renaissance, Protestant Reformation and Wars of Religion; the Aztec and Inca Empires; and the Atlantic Revolutions. In addition to textbook excerpts, students read and analyze textual primary sources, as well as art, artifacts and maps. Particular attention is paid to developing students' historical and social thinking, analytical writing, critical reading, discussion, and research skills, with a focus on primary source analysis and fundamentals of structuring an argument.

CLASS X

Global History 2

During the nineteenth and twentieth centuries, technological, social, and political change ushered in a new era in global history, one often summarized by the term "modernity." But what do we mean by "modern"? How did our contemporary world of technological marvels and remarkable transformation in many aspects of life—but also extreme inequality and, in some regions, persistent violence—come to be? In Global History 2, students address these questions through critical reading, writing, and discussion in a seminar-style class. Topics include industrialization and technological change, urbanization, discourses of belonging and exclusion such as racism and nationalism, the expansion of political rights, the new wave of imperialism that reshaped the globe in the late nineteenth century, the emergence of new political ideologies and new forms of violence such as genocide, decolonization, the Cold War, and the resurgence of religion in politics in the late twentieth century. We will discuss, among other things, varied ways imperial powers interacted with those they sought to dominate, major revolutions and wars, the continuing transformation and expansion of a global economy, individualism vs. social obligations, gender roles,

and the respective roles of the state, political ideologies, and national identities. Particular attention is paid to developing students' historical and social thinking, analytical writing, critical reading, discussion, and research skills, with a focus on short timed essays, historiographical analysis, and student-led discussion. In turn, these skills contribute to the consolidation of broader competencies such as critical systems thinking, inquiry-based learning, verbal and written communication, civil discourse, and strategic action.

CLASSES XI AND XII

Over the course of Class XI and Class XII, students are required to take two semesters of US history, one of which must be United States History 1. In addition to those two courses, students in Class XI and XII may also choose from a range of history electives. Additional requirements apply for 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.

United States History 1

Through a chronological survey that begins just prior to European colonization and concludes with the Civil War, United States History 1 explores the transformations and continuities that give character to American institutions, cultures, and social structure. Using methods and ways of thinking specific to the field of history, this course helps students understand that contemporary society has been shaped by the decisions and experiences of those who came before us. As a corollary, this course aims to inspire students to active citizenship and participation in and on behalf of the communities to which they belong. We rely heavily on primary sources, incorporate social and cultural history, follow current events, and consider historiographic changes in interpretation.

United States History 2

Beginning with Reconstruction, United States History 2 explores the continued processes through which the United States has questioned and expanded its founding principles, modernized economically and politically, consolidated

geopolitical power, and assumed its contemporary national character. In this course, students will also learn advanced research methods and explore the challenges of writing history by completing their own New York City history project that requires original research, including the use of census data. The class concludes by considering the Cold War era and its legacies.

Case Studies in American Public Policy

Are corporations people? What constitutes a marriage? When, if ever, can race be a factor in the policies of educational institutions? Through case studies, students in this elective will consider how policy-making and jurisprudence have shaped American society. Discussion-based classes will encourage students to challenge one another's assumptions about democratic values and practices and draw their own conclusions about what democracy means in the United States. This course is ideal for students who are interested in deepening their practical and historical understanding of the American political process, as well as for those interested in gaining experience with the case method of instruction frequently used in business and law schools.

Alternative Americas

Conventional historical narratives often focus on the ideas and practices that “won” and became dominant. Yet there were and still are people who lean in and fight for change, or opt out and form intentional communities where gender, consumption, property, and other essential characteristics of society are rearranged. In Alternative Americas, each week we will look at communities, real and imagined, that posit solutions to the most vexing systemic problems we face. As we move through the course and begin to think about the kind of society you think would do the most good and least harm, pay attention to important themes such as the distribution of resources within each community. What kind of ownership structures are there? How do food systems work? What is the relationship between people in a community, non-human animals, and the environment? How does each community approach gender, race, and other axes of inequality in mainstream society? What is

the role of religion? What are the ties that bind and the challenges that arise?

International Relations and its Discontents

How do international relations theorists and foreign policy analysts understand the world? What assumptions lead states and international institutions to intervention in some cases and inaction in others? Through theory and global case studies drawn from the decades after World War II, this course introduces students to major debates in international studies that impact policy-making, power relations, and the dynamics of human societies in our contemporary world. Cases may include the partition of India and Pakistan, the Suez Crisis, the creation of the non-aligned movement, US interventions in Guatemala and Vietnam, the Sino-Soviet split under Mao, Soviet cultural relations with Mozambique, and the Iranian Revolution. Students will also complete an inquiry-based research project on a topic of their choosing.

World Now

How might we assess the state of our world today? Which issues merit our attention and scrutiny? The World Now is an in-depth examination of the culture and politics that animate our contemporary global order. We begin by discussing the role of climate change and how it marks the landscape, focusing on the many narratives that inform this debate. Then, we move to international culture, with the state of journalism today and the ways in which social media has created common assumptions about how global citizens operate in an interconnected world. Then, we focus on international developments in the political sphere, the broad effects of the Ukraine War and international migrant crisis, and the rise of authoritarianism. We conclude the course with a discussion of how the United States operates in our world, approaching our recent politics, issues such as mass incarceration and poverty, the role of guns in American life, book bans and contraceptive rights. This course will enable students' engagement with some of the most pressing issues facing our world now, allowing them to see themselves as empowered historical actors. Students write three essays, taking positions on issues of their choice, and work on

solving a contemporary problem with a policy project.

History, Gender, Power

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 communities, and other marginalized 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.

History and Theory of Consumer Society: an Economic History of the United States

The term “consumer society” emerged in the United States in the 20th century, and especially after World War II, to encapsulate changes associated with the expansion of industrialization and the increasing centrality of consumption and material abundance in American life. In this course, we will explore the history of consumer society and its impact on everything from the way we organize time and space to how we construct identities and distinctions and create equalities and inequalities. Among the questions we will consider are: why did America become the model for consumer society? Do individuals control consumer society or does it control us? How does mass consumption change our relationship to one another and to ourselves? Topics will include the role of mass media and technology in transforming consumer habits, the social and economic import of fashion, and critiques of and acts of resistance to consumer society. During the second half of the semester, students will complete an inquiry-based research project on a topic of their choice. Throughout the course, we will be

attentive to how lived experience both shapes, and is shaped by, larger economic, political, and social systems.

Modern Latin American History and Literature

During the 20th century, seven Latin American authors 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.

HISTORY MINORS

CLASSES XI AND XII

Holocaust and Human Behavior M

Holocaust and Human Behavior explores the unfolding of the Holocaust through a historical, sociological, and social psychological lens. From the emergence of a German nation-state and racial antisemitism in the late nineteenth century, through the cultural flowering of the Weimar Republic, the rise of the Nazi party and state, the outbreak of World War II, and the development of the shooting squads and death camps that implemented the so-called Final Solution, students will trace a complex narrative of choices, contingencies, and structural factors that culminated in an unprecedented historical catastrophe. The course will conclude by exploring the reconstruction of Jewish life and quest for justice and accountability in the postwar years.

MATHEMATICS

At the Nightingale-Bamford School, we believe math should be seen as beautiful and complex. We value reasoning skills, complex conceptual and abstract thinking, decision-making, and curiosity as essential components of mathematical learning. We strive to create an inclusive learning environment that supports students with a wide range of backgrounds, experiences, and learning styles where our differences are opportunities for learning and growth. We believe in the importance of empowering our students to openly engage in productive struggle and actively strive for our students to be the problem finders and problem solvers of the next century.

The Upper School math curriculum guides students toward increasingly abstract and complex mathematical concepts. Geometry challenges students to think spatially, exploring relationships between shapes, sizes, and dimensions while emphasizing logical reasoning. Trigonometry introduces the study of angles and their applications to periodic phenomena, while statistics teaches students to analyze data and make informed predictions about the real world. Finally, calculus unites concepts of change and accumulation, offering powerful tools to solve problems in science, economics, and beyond. Throughout this progression, students deepen their mathematical understanding, developing competencies in Throughout the Upper School progression, there is intentional focus on the key competencies of mathematical communication, collaboration, perspective-taking, modeling, and reasoning to cultivate a mathematical mindset and prepare them for diverse academic and real-world challenges.

CLASS IX MATH CORE IX

Grade IX Math is Part I of an integrated sequence covering Algebra II, Geometry, and Data Science. It is also part of a semester-long interdisciplinary STEM program with

Science and Computer Science IX. In this course, students explore mathematical concepts by analyzing and applying problem-solving techniques in various intra- and inter-disciplinary situations. They develop connections between algebraic and geometric principles, using right triangles and circles as the building blocks for geometry, trigonometry, vectors, families of functions, infinity, data modeling, and regression analysis. The course also goes beyond traditional boundaries by focusing on developing mapping techniques and geometric analysis of the cholera epidemic in 19th-century London. The course develops students' techniques for identifying and building strategies, mathematical modeling, and algorithmic and geometric processes. Students wrestle with abstract material and understand the necessary depth of thought to master concepts. Throughout the course, mistake-making is celebrated and harnessed as learning opportunities.

CLASS X MATH CORE X

Math X is Part II of our integrated sequence covering Algebra II, Geometry, and Data Science topics. It is also part of a semester-long interdisciplinary STEM program with Science and Computer Science X. It is grounded in the conceptual understanding of a function. In this class, students will develop strategies for the analysis of relationships between variables, be introduced to the complex plane, and analyze the connections between quadratic, exponential, logarithmic, rational, radical and higher degree polynomial functions. Regression modeling will occur throughout the course and connect with other STEM courses. Matrices are introduced as a tool for problem solving. Students will be able to analyze and develop functions with visual, algebraic, and numeric representation and use various chemistry principles to practice this, such as the logarithmic pH-scale. A willingness to wrestle with abstract material will be emphasized in the course, as well as a necessity for depth of understanding to master concepts. Mistake-making will be celebrated and harnessed as learning opportunities.

CLASS XI

Precalculus

In Precalculus, students expand their mathematical knowledge by focusing on advanced applications of algebraic, geometric, and trigonometric concepts. The course emphasizes the analysis and application of mathematical techniques across interdisciplinary scenarios, fostering a deep understanding of function families, including polynomial, rational, exponential, logarithmic, and trigonometric functions. Students explore transformations and applications of these functions, culminating in mathematical models that connect theory to real-world phenomena.

The course delves into sequences and series as a foundation for mathematical progression and introduces students to intuitive concepts of limits and continuity to bridge the gap into Calculus. Students will analyze and develop functions through visual, algebraic, and numeric representations, applying techniques such as factoring, logarithmic rules, and polynomial division to solve complex problems. Through conceptual exploration, students will develop strategies for tackling abstract material and understanding connections between advanced mathematical topics. Mistakes are celebrated as integral to the learning process, fostering resilience and a willingness to engage deeply with challenging content.

CLASSES XI AND XII

Calculus

In Calculus, students embark on a rigorous study of differential and integral calculus, exploring foundational concepts, techniques, and real-world applications. The course begins with an in-depth examination of functions, limits, and continuity as the building blocks of calculus. Students then progress to the concept of derivatives, deriving rules for a variety of functions and their inverses, including polynomial, rational, trigonometric, logarithmic, and exponential functions. The curriculum emphasizes the relationship between differentiation and integration through the Fundamental Theorem of Calculus, providing

students with a comprehensive understanding of how these tools are interconnected. Integration techniques are applied to solve problems involving area, volume, and summation, allowing students to model and analyze complex systems. Through the exploration of abstract concepts and practical applications, students develop strategies for mastering advanced mathematics. Mistakes are embraced as opportunities for growth, fostering resilience and a willingness to engage deeply with challenging material.

Advanced Calculus (B Level)

Departmental permission required

In addition to the coursework described above, topics include applications such as optimization and related rates problems, and volumes of solids of revolution.

Advanced Calculus (A Level):

Departmental permission required

In addition to the coursework described above, topics include polar coordinates, vector functions, parametrically defined curves, logistic curves, sequences and series, integration by parts and partial fractions, and elementary differential equations.

Advanced Math: Linear Algebra

Prerequisite: Advanced Calculus A and departmental permission

In Linear Algebra, students study matrix theory and linear systems. Through the axiomatic approach, they master the fundamental concepts of finite vector spaces, subspaces, bases, dimension, and linear transformations. They explore the important role Linear Algebra plays in many areas of mathematics, statistics, engineering, the natural sciences and computer science, using programs such as Octave, LaTeX, and MatLab when applicable. They develop their understanding through applications in statistics, physics, economics, genetics, differential equations, dynamical systems, and probability. Linear Algebra is a college-level course and demands a high level of abstract understanding and critical thinking from the students.

Standard/Advanced Statistics

This course introduces students to the major topics in an exploratory analysis of data. Planning and conducting a study, variable distributions, various statistical tools to analyze both quantitative and qualitative data sets, statistical inference, and visual representation of data are major themes of the course. Students examine sampling, surveying, research and experimentation as methods of collecting data. Correlation and Chi-squared Tests are used to explore the power of statistical inference and prediction. Students then use these tools to investigate topics of personal interest throughout the year. Data is used to understand themes and nuances in political polling and the process of redistricting. This year-long course is often about nuance in numbers, an idea less explored in most math courses.

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.

Collaborative Problem-Solving **M**

A collaborative problem-solving class where students work together on a small number of challenging problems over an extended period of time. Topics covered per seminar include combinatorics, number theory, geometry, algebra and inequalities. Students will acquire sophisticated problem-solving skills and a knowledge base that will allow them to successfully tackle the sorts of problems one sees on more challenging math contests such as the American Invitational Mathematics Examination (AIME). Although the prerequisites for this class are only algebra, geometry, and perhaps a bit of trigonometry, the comfortably-placed student will be a creative mathematical problem solver with an unusually solid mathematical background. The problems and topics covered in the class are challenging.

Chaos Theory **M**

Chaos theory, a cutting-edge field of math that took off with the advent of modern computing, has applications in everything from meteorology to the stock market and beyond. In this course, we will study fundamental ideas in chaos theory and the mathematical discipline of dynamical systems, an area of math focused on systems that change over time. Starting with the idea of iteration, we will explore how small changes in initial conditions can produce big differences in outcomes. We will come to understand a hallmark of chaos theory and dynamics: even the most simple and deterministic systems can produce unpredictable behavior and even the most complex systems can reveal some kind of order. Finally, we will see how these ideas apply to the beautiful world of fractals, including the Julia sets and the Mandelbrot set.

SCIENCE

The Science Department is dedicated to providing a robust and interdisciplinary approach to STEM education, developing students' competencies in science, technology, engineering, and mathematics with a focus on managing information, communicating ideas, problem solving, and critical thinking. We emphasize the integration of math, science, and computer science throughout our curriculum, striving to break down the silos between these disciplines and foster a more interconnected understanding of the world. Our core science classes lay a strong foundation, while our diverse array of semester-long elective courses allows students to explore specialized topics across a wide range of fields. These include, but are not limited to, organic chemistry, engineering, the genetics of cancer, and many other advanced topics. Additionally, we offer courses that appeal to students with an interest in the intersection of science and society, such as bioethics, public health, and psychology. For those with a creative flair, we also offer unique opportunities, like textile chemistry, where students can explore the environmental impacts of fast fashion. This

comprehensive approach ensures that students are well-prepared for the ever-evolving landscape of modern science and technology.

CLASS IX

Science CORE IX: Biology

In Science IX, students explore biology through inquiry, phenomena, and experiential-based learning. The major themes of this course are the relationship between structure and function, energy transfer, continuity and change, and interdependence in nature. Students work collaboratively to execute and occasionally design experiments, collect and analyze data with their peers, and enhance their problem-solving and communication skills through interactive work. This approach helps students gain a deeper understanding of scientific methodologies. The laboratory component reinforces these concepts and hones critical scientific skills. Additionally, by integrating current events, the course encourages students to apply scientific principles to real-world situations and their everyday lives. This course is part of a semester-long interdisciplinary STEM program with Math and Computer Science IX.

CLASS X

Grade CORE X: Chemistry

Prerequisite: Biology

In Science X, students learn chemistry through differentiated techniques that include flipped classroom instruction, tiered units, formative lab activities, and collaborative experiences. Collecting and evaluating data for trends is central to each unit, as is being able to represent conclusions both visually and symbolically. Topics include atomic structure, matter and energy, and thermodynamics. All material is introduced in a real-world context to better aid the students in making connections between their learning and personal experience.

CLASSES XI AND XII

Physics

Prerequisite: Biology and Chemistry

Physics is an algebra-based first-year physics course open

to all students who have successfully completed other lab science courses. Physics and its applications surround us in our daily lives and we explore those connections by studying a broad range of topics and phenomena. Our major units of study include linear and non-linear kinematics, forces, momentum, energy, electricity, magnetism, and light. Physics emphasizes conceptual understanding and problem-solving while strengthening connections to mathematics and other branches of science. Experiential learning is central to our exploration of physics, and this is accomplished through hands-on laboratory activities and digital simulations.

ADVANCED COURSES

After completing the STEM CORE courses, interested students in Classes XI–XII can continue their studies in an advanced-level course. Advanced science courses involve more in-depth study, increased independent learning, and often a quicker learning process. Class XI students must enroll in physics to enroll concurrently in an advanced course in biology or chemistry.

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.

Advanced Biology: Biochemistry

Prerequisite: 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 water's chemical structure and properties. 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 is lab-intensive, emphasizing college-level lab methodology and skills.

Advanced Biology: Biology of the Nervous System

Prerequisite: Biology and Chemistry

This semester-long class focuses on the biology of the nervous system. We will begin by studying basic neurochemistry and then examining neurological and neurodegenerative diseases, including major depression, multiple sclerosis, Parkinson's disease, Alzheimer's disease, and ALS. We will read primary sources as we look at treatment options, their mechanisms of action, and their mechanisms of action, as well as the current research. The lab component of the class will consist of brain dissections in which we study the anatomy and function of the brain.

Advanced Chemistry: Organic

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, emphasizing functional group characteristics, structure determination by spectrometric methods, reaction mechanisms, and synthesis.

Advanced Chemistry: Analytical

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 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 fieldwork planning, sampling activity, sample preparation chemical analysis, interpretation of results, and reporting.

Advanced Physics: Modern

Prerequisite: Physics

What would it be like to travel at near-light speed? How is Schrodinger's cat both alive and dead at the same time? If you have ever wondered about these things and other paradoxes, then you have come to the right place. Modern physics is a semester-long exploration of key discoveries that have led to the development of relativity and the quantum world. We will study topics such as atomic structure, the wave-particle duality of light (and everything), quantum mechanics, special relativity, and general relativity. The student experience in modern physics involves more complexity and theory than our first physics offering. There will be experiential learning opportunities to examine how physics intersects with other subject areas, including statistics, medicine, astronomy, and engineering.

Advanced Physics: Topics in Physics with Calculus

*Prerequisite: Physics**

Students must also be enrolled in Calculus. Offered in the second semester, Topics in Physics with Calculus revisits physics concepts learned previously, going beyond the treatment of linear motion that occurs in all levels of calculus. We explore topics in physics by applying vector arithmetic and calculus concepts such as limits, differentiation, optimization, integration, and more. This course provides students who may be considering a major in physics or engineering opportunities to apply their knowledge to challenging problems such as optimizing projectile range, the messy motion of objects encountering drag, rocket propulsion, and more. The student experience in our course will be one of greater depth, with connections intentionally made between calculus and its applications in physics.

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

Advanced Physics: Engineering

Prerequisite: Biology, Chemistry and Physics

In this hands-on project-based class, students explore applications of the core Upper School science disciplines: biology, chemistry, and physics through the lens of engineering. The engineering themes of iterative design, optimization with constraints, collaboration, and effective communication will be emphasized, and associated skills will be taught and developed.

Because the class is interdisciplinary, modules will focus on a project, or projects that combine multiple science disciplines, and specific emphasis will be placed on relating our designs to concepts studied in our prior (and concurrent) Upper School science classes, with a particular emphasis on physics. We will explore fields of engineering such as mechanical engineering, electrical engineering, chemical engineering, and environmental engineering through a variety of smaller and longer-term projects such as building vehicles and wind turbines, designing camera obscuras, building musical keyboards, optimizing processes such as coffee production, and designing air quality and flood water sensors that can be used in crowd-sourced. Science projects such as Citizen Science or a collaboration with an environmental engineering lab at NYU are also germane to this course of study.

Biotechnology

Prerequisite: Acceptance into ISRP

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 troubleshooting, 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 experiment to determine whether food products have been genetically modified.

SCIENCE ELECTIVES

Introduction to Bioethics

Prerequisites: Biology

This semester-long course will begin by establishing conceptual guidelines used in the bioethics field that promote careful thinking about difficult cases. We will explore and learn to apply four key questions used by ethicists to clarify the issues required to make ethical decisions. Students will learn how to offer valid reasons for ethical choices and also how to handle varying opinions. We will then move on to explore ethical issues through a series of case studies. As we look at specific cases, we will review the science involved and at times spend meaningful class time reviewing biological concepts critical to understanding the cases. Case studies will cover a broad range of topics in biomedicine, including genetics, neuroscience, clinicians' professional responsibility in communicating with patients, new models of health care delivery, including direct-to-consumer companies, and issues in human subject research. All of the cases are designed for a high school audience and encourage the practice of reasoning and reconciling competing values.

Astronomy

This semester-long course presents an overview of the night sky and stellar astronomy. Topics studied include positioning, Earthly cycles, gravitation and planetary motion, properties of light, telescopes, the Sun, stellar evolution, and exoplanets. Students will be expected to do some math-based problem solving, produce a video on a topic that goes beyond the topics we study in class, and give a presentation to peers as part of a research project.

Anatomy and Physiology

Prerequisite: Biology

This anatomy and physiology major elective will offer students a lab-intensive course, in which they will study some of the major organs in mammals. Each unit will focus on one of the body's major systems and include a one to two-day dissection period. Dissections will include a cow's heart, a cow's brain, and a sheep's pluck. This class will give those students interested in the biological sciences an opportunity to delve deeper into each system and have significant experiential learning.

Psychology: Biological and Behavioral Approaches

Prerequisite: 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.

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.

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.

A Sustainable World

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.

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.

INDEPENDENT SCIENCE RESEARCH PROGRAM (ISRP)

The Independent Science Research Program, part of the STEM Scholars Pathway, is open to highly skilled, motivated, and dedicated students of science in Classes XI–XII. Students apply to the program during the spring semester of Class X, and by applying to the program, students indicate an intention to commit at least six to eight weeks to intensive science research during the summer between Class XI and Class XII. While most research placements involve a lab setting, field placements are also possible. In addition, students in the program must enroll in the Advanced Science: Biotechnology course during the spring semester of Class XI, and they must enroll in the Science Seminar course every year that they are in the program.

Science Seminar **M**

Required for ISRP students

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. Students who have been accepted in the Independent Science Research Program must enroll in Science Seminar each academic year they are a part of the program; other students are invited to attend as space permits.

MODERN LANGUAGES

The goal of the Modern Languages Department is to use the three languages we offer (French, Spanish, and Mandarin

Chinese) to develop multilingualism, multiculturalism, and interpersonal, interpretive, and presentational communication skills in our students.

Across the four language skill areas of speaking, listening, reading, and writing, students learn to communicate in a foreign language, often for the first time. They learn to apply grammatical rules, identify patterns, and process unfamiliar language using context clues. They imitate native speech patterns and phonology in order to spontaneously interact with others, interpret written material, and present rehearsed speech. Students learn to make comparisons between their native language(s) and target language, appreciating differences of nuance and grammar that are reflected in the ways languages express similar concepts. They begin to appreciate the journey of lifelong learning they are embarking on, while fostering connections to those who speak the target language. Students begin to take perspective on how their own culture fits into the broader world, and how it interacts with the culture of the target language. They learn to make intercultural connections, while deepening both their own sense of belonging in their language community and their understanding of other cultures.

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 with no prior French experience 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 that began in middle school.

French 2

Prerequisite: French 1 or by placement

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

French 3

Prerequisite: French 2 or by placement

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

Prerequisite: French 3 or by placement

This is an excellent opportunity for students requiring more time to hone their writing and speaking skills. It is a natural progression from French 3, allowing students time to refine their 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.

French 5

Prerequisite: French 4 or by 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.

Advanced French: Culture, Literature, and History

Prerequisite: French 5 or by placement

In this year-long advanced course, students study a variety of topics related to specific aspects of contemporary culture, society, French history, art, and some iconic works of literature. Examples of the aforementioned include: poetry of the Romantics such as Hugo and Lamartine, regional culinary specialties, Gothic architecture and the reconstruction of Notre-Dame de Paris, the history of Francophone Africa, 19th Century realism in art and literature, French New Wave cinema, immigration in France, etc. Students continue honing their speaking and writing skills on a variety of topics, thereby increasing their ability to express themselves on myriad subjects.

SPANISH

Spanish 1

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

Prerequisite: Spanish 1 or by placement

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 syntax are contextualized.

Spanish 3

Prerequisite: Spanish 2 or by placement

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

Prerequisite: Spanish 3 or by placement

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.

Spanish 5

Prerequisite: Spanish 4 or by 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.

Advanced Spanish: Culture, Literature, and History

In this year-long advanced course, students study a variety of topics related to specific aspects of contemporary culture, society, history, art, and some iconic works of literature of the Spanish-speaking world from Europe and the Americas.. Examples of the aforementioned include: poetry of the Golden Age, regional culinary specialties of the Caribbean, Catalan modernist architecture, Simón de Bolívar and the wars of South American independence, the films of Almodóvar, bolero and tango, the art of Goya and Velásquez, social realities in Central America and the Caribbean, Pre-Columbian civilizations, etc. Students continue honing their speaking and writing skills on a variety of topics, thereby increasing their ability to express themselves on myriad subjects.

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

Prerequisite: Chinese 1 or by placement

This course is a natural continuation of what was covered in Chinese 1. A significant amount of new vocabulary and characters is added to the curriculum, as students expand their grasp of Chinese grammar, idiomatic expression, and cultural references. Authentic readings are incorporated in the instruction to allow students to contextualize their understanding of written and spoken Mandarin.

Chinese 3

Prerequisite: Chinese 2 or by placement

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

Prerequisite: Chinese 3 or by placement

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 have read. By the end of the course, it is expected that students will 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. At the end of the course, depending on performance and at the discretion of the department, the student may take Advanced Chinese or repeat a second level of this course.

Advanced Chinese

Prerequisite: Chinese 4 or with 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 and written 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 written compositions to oral presentations in the target language.

CLASSICS

Latin teaching in the Upper School has two separate tracks: one for students without prior knowledge of Latin (Elementary and Intermediate Latin) and one for students who began their study of Latin in Middle School (Latin 2 - Advanced). 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.

The Latin program is supplemented by two other elective courses of study: Ancient Greek and Ancient Philosophy, both of which are offered as semester-long minors.

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. Central areas of focus include critical thinking and problem solving, interdisciplinary connections, and the development of a growth mindset.

Intermediate Latin

The course is a continuation of Elementary 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, such as Ovid, Seneca, and Pliny the Younger. Discussion of historical and cultural influences within these works are also featured. Central areas of focus include reading comprehension, literary analysis, contextual understanding, translation proficiency and interpretation, and the development of discussion and presentation skills and a growth mindset.

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. Students will improve their reading and comprehension through progressively challenging Latin texts, deepen their understanding of Latin

grammar, learn to analyze and interpret Latin poetry by studying the themes, stylistic and rhetorical techniques used by Latin poets, and develop their critical thinking, research, discussion, and presentation skills.

Latin 3

This course will provide an overview of Latin literature and will study selections from prose (Caesar, Cicero, Sallust, and Apuleius) 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 Advanced Latin courses. Students will deepen their understanding of Latin grammar, through the analysis and interpretation of Latin literature and poetry, and enhance their critical thinking, research, discussion, and presentation skills.

Advanced Latin: 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. This course represents the culmination of a student's study of Latin at Nightingale and offers the opportunity for deep analysis, interpretation, research, and presentation of learning.

CLASSICS ELECTIVES

Ancient Greek 1.1 M

This course introduces students to the foundational building blocks of Ancient Greek: the alphabet along with some

basic vocabulary and grammar. It will include readings and exercises that aim to help students learn the language of Homer, Sappho, Sophocles, and Plato, and will address historical, cultural, and linguistic themes within these texts. The course will conclude with the Ancient Greek 1.1 Microproject, which challenges students to trace the history and evolution of a word from Greek into English, noting its transformation in use and application over time and space. Throughout, there is an emphasis on vocabulary building, language mechanics, interdisciplinary connections, understanding in context, and developing research, discussion, presentation skills and a growth mindset through the study of challenging content.

Ancient Greek 1.2 M

In this course, students will continue to expand their knowledge of the Ancient Greek language through readings and exercises, focusing on grammar and enriching their 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. The course will conclude with a capstone project that students will develop with the guidance of the instructor and present to the class. Furthering the work of the introductory course, there is a continued emphasis on vocabulary building, language mechanics, interdisciplinary connections, understanding in context, and developing research, discussion, presentation skills and a growth mindset through the study of challenging content.

Ancient Greek 2.1/3.1 M

In this course, students will engage with the Ancient Greek language and culture through the translation, examination, and analysis of excerpts from such texts as the Homeric Hymn to Aphrodite, Plato's Symposium, Homer's Odyssey, and Sophocles's Antigone. Students will continue to study morphology, syntax, and vocabulary tailored to the demands of each text. Readings in English will focus on the contributions of the Ancient Greeks to literature, art, history, and science. The course will conclude with a capstone project that students will develop and present to the class.

Ancient Greek 2.2/3.2 M

In this course, students will continue to engage with the Ancient Greek language and culture through the translation, examination, and analysis of excerpts from texts such as Euripides' Medea and Bacchae, Sappho's Odes, Herodotus' Histories, and epics from the Homeric cycle. Students will continue to study morphology, syntax, and vocabulary tailored to the demands of each text. Readings in English will focus on the contributions of the Ancient Greeks to literature, art, history, and science. The course will conclude with a capstone project that students will develop and present to the class.

Ancient Philosophy 1 M

This course provides a wide-ranging introduction to ancient philosophy as it was conceived and practiced in the Greco-Roman world. Over the course of the semester, students will study the questions that Greek philosophers posed about the world around them, their answers to those questions, and, not least, how their answers influenced other aspects of their society, including religion and science. Our ambitious inquiry will begin with the natural philosophers or "Presocratics," who attempted to address the origins and the nature of the cosmos. From there, we will turn our attention to the figure of Socrates and the writings of Plato, which expand upon early theories regarding rhetoric and the immortality of the soul. Throughout the focus will be on developing students' critical thinking, philosophical argumentation, persuasive communication, and cultural competency as they take on, challenge, and defend radical ideas from ancient thinkers.

Ancient Philosophy 2 M

This course provides a different, also wide-ranging introduction to ancient philosophy as it was conceived and practiced in the Greco-Roman world. Over the course of the semester, students will study the questions that Greek philosophers posed about the world around them, their answers to those questions, and, not least, how their answers influenced other aspects of their society, especially ethics. Our ambitious inquiry will focus on what it means

to live a happy life. As such we will study Aristotle, Plato's student and Alexander the Great's tutor, who wrote on a range of topics from the natural sciences to poetics and politics. From there, the class will explore the Epicureans and the Stoics and how these Hellenistic thinkers transformed philosophy and influenced Western thought. Students will engage with the reading through homework responses, class activities, discussions, and lectures. They will also work on an independent research project to be presented in the final two weeks of the course. Throughout the focus will be on developing students' critical thinking, philosophical argumentation, persuasive communication, and cultural competency as they take on, challenge, and defend radical ideas from ancient thinkers.

COMPUTER SCIENCE

The Upper School Computer Science Department works to develop three primary competencies in its students: programming, systems thinking, and a creative, problem-solving and growth mindset. From introductory through upper level courses, students learn to write code to manipulate data and to perform analysis, as well as to present their findings through dynamic visualizations. Students develop logical thinking and problem-solving skills and are introduced to frameworks for understanding the interconnectedness of data, technology, and broader societal concerns. Throughout the arc of the program, students are asked to grapple with increasingly complex and abstract material in a cycle of design, feedback, and iteration, necessitating commitment, focus, and the ability to work through setbacks.

CLASS IX

Programming & Data Analysis

This year-long course introduces students to the fundamentals of data analysis and artificial intelligence through hands-on learning and real-world applications. In the first semester, students explore Python programming,

focusing on data structures, analysis, and visualization using libraries like Pandas, while incorporating tools like ArcGIS StoryMaps. These tools are introduced within the context of the STEM IX Ghost Map curriculum. The second semester shifts to the foundations of AI, where students learn about generative and predictive models, gaining practical experience with machine learning frameworks through tools like TensorFlow. Along the way, students develop and train their own AI models, deepening their understanding of how AI works. The course also examines the broader societal impacts of AI, fostering critical thinking about its ethical and cultural implications. By the end of the year, students will be well-equipped with technical skills and a thoughtful perspective on the evolving role of data and AI in our world.

Technology, Data, and Storytelling **M**

This semester-long course empowers students to uncover the powerful narratives that data can convey through the instruction of various technologies and tools. We will begin by introducing students to personal data organization and management, providing a broad overview of ways to understand and navigate personal data storage and the use of essential tools for successful technological integration into academic classes. Students will then learn how to manage, analyze, and present data in engaging ways using various tools, including ArcGIS StoryMaps and Google Sheets. Through hands-on projects and real-world applications, students will better understand how analyzing data is used to influence decision-making, address societal problems, and drive innovation in today's digital world.

CLASS X

Computer Science X: Programming Fundamentals **M**

This minor course introduces students to the fundamentals of text-based programming, circuitry, and electrical systems through a physical computing framework centered on Arduino microcontrollers and the C++ programming language. The course emphasizes hands-on learning to explore the integration of hardware and software using Arduinos. Students will learn to build and program circuits using inputs, outputs, and sensors, combining hardware

and software to create interactive systems. Students will also use programming concepts to collect, analyze, and visualize data from the world around them.

CLASSES XI AND XII

Advanced Programming I

This semester-long advanced course focuses on Java and aims to equip students with a comprehensive understanding of programming. Students will cultivate their understanding of coding through analyzing, writing, and testing code as they explore concepts like modularity, variables, and control structures. The start of the course will cover essential concepts such as primitive types, if-statements, and iteration before moving on to more advanced object-oriented programming concepts such as recursion and inheritance.

Advanced Programming II

Prerequisite: Advanced Programming I

As a continuation of Advanced Programming I, this course deepens students' understanding of Java programming with a focus on more advanced topics such as classes, objects, file input/output, inheritance, and recursion. Students will apply their knowledge through projects that involve designing and implementing larger programs, encouraging creativity and problem-solving. The course highlights best practices in program design, debugging, and testing while continuing to build students' confidence in working with increasingly complex coding tasks. By the end of the semester, students will have developed the skills to approach advanced programming challenges with independence and critical thinking.

Design and Digital Fabrication II **M**

Prerequisite: Design and Digital Fabrication I

This minor elective is open to students who have completed Design and Digital Fabrication I. Over the course of a single semester, students will engage deeply with the iterative design process, transforming initial ideas into fully realized projects. Through repeated prototyping and refinement, they will develop their concepts using a variety of tools and technologies, including laser cutters, 3D printers, AR

and VR systems, and physical computing devices. The design journey is enriched by critiques, field trips, historical discussions, and in-class activities, which expand students' understanding of design principles and their applications. By the end of the course, students will not only have created tangible outcomes but also gained insights into the broader impact of design in everyday life.

Advanced Robotics and Engineering

Prerequisite: Advanced Programming I

This semester-long course immerses students in the exciting world of robotics engineering through hands-on exploration of engineering principles and programming techniques. Students will begin by understanding the fundamentals of robot design, including chassis construction, drivetrain systems, and manipulator integration. They will then dive into programming with Java, learning to create both autonomous and driver-controlled robot functions while integrating advanced concepts. This course equips students with the technical skills, critical thinking, and collaboration necessary to excel in robotics engineering and beyond.

HEALTH AND WELLNESS

The Health Education Department strives to prepare students to navigate and care for their personal health. We approach health as a multi-dimensional and essential part of an individual's identity, and encourage students to give attention to each area of their well-being. We focus on skill-building as a key component of managing personal health. As students move through our program, they demonstrate their increasing ability to manage more complex realistic health scenarios for students their age.

CLASS IX

Foundations in Health and Wellness M

This course establishes the foundation for health and wellness education in the Upper School. Essential health skills including decision-making, communication, and

analyzing influences are introduced to students to support them as they navigate their early high school experience. Students 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 course is required for all Class IX students.

CLASS X OR XI

Adolescent Health M

Adolescent health is a required course that students must take as either a sophomore or junior. With a focus on adapting safe and healthy behaviors, this course addresses multiple dimensions of health. Students build skills and gain knowledge that they will apply to real-life health scenarios for adolescents while in the classroom and gain confidence to apply these skills and knowledge to improve their personal health in their everyday lives. Content areas including mental health, gender and sexuality, nutrition, and substance use and abuse will be covered in depth. Students will be better equipped to access valid health resources, reduce health and safety risks, identify and manage influences on personal health and safety, and use their strengths to enhance well-being.

CLASS XII

Personal Health Beyond the Blue Doors 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 explore healthcare on college campuses, navigating appointment-making, living with a roommate, drinking culture on college campuses, sexual and reproductive health in adulthood, and more. Student input and current issues in wellness are considered throughout the duration of the course.

Mind Over Matter: A Course on Stress Management M

This course is designed for the busy high school senior looking to develop their stress-management skills. Students

learn about the science behind stress before exploring and practicing health-enhancing stress management strategies. Students analyze the impact of stressors on personal health, build a self-care toolbox, evaluate the effectiveness of a range of stress management strategies, and demonstrate the ability to apply these strategies both in and out of the classroom.

Beyond Barriers, Binaries, and Bad Takes M

This course builds on and deepens previous health class discussions of gender, sexuality, anatomy, and the context in which we receive and internalize this information. Students analyze and work through both personal and socio-political barriers, explore and unpack binary approaches to health concepts, and utilize media literacy skills to approach "bad takes" in the age of misinformation, especially as they pertain to health advice, social media, relationships, and our bodies.

VISUAL ARTS

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.

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.

Digital Imaging M

This course is oriented towards graphic design. Students will use Photoshop to edit and retouch digital images, create photo montages, fantastic landscapes, and self portraits, employing special effects and experimenting with type to create a portfolio reflective of their individual interests.

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.

Introduction to Painting M

Students will investigate the fundamentals of painting the still life, landscape, and how painting can be used as a vessel to argue one's point of view for social justice. They will work primarily from direct observation and reference imagery. Assignments will address composition, the representation of space and form, the modulation of color, and atmospheric perspective. Once students gain confidence with the medium, they will be asked to create a persuasive painting, using imagery, to lobby for a cause they feel strongly about.

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.

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 graphite, charcoal, and colored pencil. This will include exploring proportion, anatomy, and various methods of creating value.

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.

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.

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.

CLASSES XI AND XII

STUDIO MAJORS

Studio Art Majors are offered to students who have taken at least two semesters of elective art courses and want the opportunity to refine their skill set and create a substantial portfolio with the guidance of a member of the art department. Students are encouraged to express their interest to the relevant instructor in advance of registering. Students may register for Studio Art in one of four areas of concentration: ceramics, drawing, painting, or photography.

Ceramics

Ceramics for academic credit offers an immersion in ceramic history, techniques, aesthetics and practice. Some options for more in-depth processes include creating plaster molds and slip casting, making custom decals, and working with underglaze chalk, china paint and luster. Every student will present their work in a completed portfolio accompanied by a written narrative at the end of each semester.

Drawing

Drawing for academic credit offers an advanced studio experience for a student who desires to specialize in a drawing medium and/or explore an in depth study of specific content. An emphasis will be placed on developing original content and drawing from live observation and imagination. Students may work in a range of drawing materials and should anticipate completing multiple finished works. Student work will be displayed and accompanied by an artist statement at the end of each semester.

Painting

Painting for academic credit offers an advanced studio experience and in depth study of painting. Students will be asked to create a series of works based on a theme and focus on developing mastery in a medium of their choice. Oil, acrylic and watercolor are options. An emphasis will be placed on developing original content and students will need to work from live observation or imagination. Student

work will be displayed and accompanied by an artist statement at the end of each semester.

Photography

Photography for academic credit is an option for the student who has demonstrated a commitment to the medium and wants to continue to hone their skills and build a thematic portfolio that reflects a personal vision rather than a collection of assignments. A written statement about the work is submitted along with the portfolio at the end of each semester. Experimental projects, combined media, digital imaging, and alternative processes are possible areas of exploration.

ART HISTORY

CLASSES XI AND XII

Advanced Art History

Advanced Art History is equivalent to a 100-level college 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.

PERFORMING ARTS

We believe that performing arts are fundamental to the human experience and integral to students' education and growth. The vision of the Performing Arts Department is for Nightingale students to be emboldened through the creative process so they can connect with themselves and engage with curiosity and compassion within the classroom and in the global community. To that end, in Theater, Music, and Dance, students are offered the opportunity to: experience diverse genres, artists, repertoire, and instructional practices; cultivate habits that foster patience, resilience,

and critical thinking; emphasize personal and collective growth through meaningful collaboration; and explore the role of performing arts in challenging conventional boundaries. Throughout every Performing Arts course, students have the chance to explore the process of and practice creating and performing, and responding and connecting to art.

THEATRE

Theatre 1 M

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

Theatre 2 M

Prerequisite: Theatre 1

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 work on scenes in classical drama from Greek tragedy to Shakespearean comedy. This course is taught by a professional guest actor.

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.

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

CLASSES IX–XII

Upper School Chorus M

Upper School Chorus is a non-auditioned singing group. The ensemble performs at the annual winter and spring concerts as well as the Interschol Choral Festival. Through their study, students learn the physiology of the voice and gain an understanding of how fundamental vocal technique applies to various styles of singing. Literacy skills include applying solfege and rote teaching to learn repertoire, thus expanding students' knowledge of how music is taught around the world. Repertoire is chosen from a wide variety of styles, periods, cultures, and genres. Students receive arts credit for participation in Upper School Chorus.

Upper School Ensemble M

Upper School Ensemble is open by audition to all string and select woodwind players. The class operates as a chamber orchestra, with opportunities for students to build their sight-reading skills and refine their playing technique within an ensemble. Repertoire ranges from classical to contemporary works with consideration of student input, and the ensemble performs at least twice each year. Students will receive fine arts credit for this class.

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 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.

Music Production and Composition M

This semester-long course will focus on writing, arranging, and producing music. While the course focus will be on music, skills acquired will be useful for podcasting, sound design, and engineering. These will be great tools to have for other classes in which audio knowledge is useful (i.e. creating videos, podcasts, soundscapes, etc.). Through a series of lessons and small projects, students will gain the skills to create various projects that rely on sound production and editing. The intention is to offer a space where composition students can continue to explore their musical skills, while also teaching nonmusicians how to utilize various online programs like Soundtrap and Noteflight—allowing them to not only compose music, but also create projects that will be useful in other content areas. Each student will create up to five original pieces throughout the course. No previous knowledge in music is required; each student will be working at their own pace based on their level.

CLASSES X–XII

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. 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 singers serve as ambassadors of Nightingale at school functions, regularly

perform around the city, and participate in NYSSMA, the New York State School Music Association festival. In recent years, Chamber Chorus has toured both domestically and internationally. Students receive arts credit for participation in Upper School Chamber Chorus.

DANCE

The Dance program centers cultural awareness, artistic expression, the development of an artistic/creative voice, contextualizing Contemporary dance and performance, and critical reflection and analysis. 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 Elective: Dance and Politics M

This course will explore dance that reaches beyond convention into the political category. All 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.

PHYSICAL EDUCATION

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 trimester 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. Courses offered may include running & jogging, power walking, strength training, Kickboxing, Cardio Jam, and Zumba to name a few.

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. Courses in this category may include badminton & racquet sports, cooperative games, and Lower School games. Participation in two sports fulfills a student's PE requirement for the year. 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 to our Alternate Athletic Credit Program.

ATHLETICS

Nightingale recognizes the value and importance of athletic participation. We offer a wide-ranging program of competitive teams for our students. Participation in two sports fulfills a student's physical education requirement for the year.

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. Students learn traditional and emerging literacies, critically using and assessing a variety of information sources. Individual conferences and small group instruction provide practice in articulating research questions and investigating robust lines of inquiry. 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 digital books.

Through partnerships with local organizations, we offer a range of interdisciplinary opportunities that give students

a chance to experience hands-on research and cultural enrichment. These projects are designed to empower students to explore New York City's cultural centers, literary events, and historical societies.

The library's diverse collection reflects the community's wide range of interests, perspectives, abilities and identities. 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, and agile thinkers who will thrive in a college environment, equipped with skills for life.

VISUAL EDUCATION

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.

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.

OFF-CAMPUS STUDY

Nightingale is deeply committed to providing opportunities for its students to engage in global studies and develop comfort and confidence as members of an interconnected, global world. 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 optional trips have included travel to China, Cuba, Iceland, France, Italy, Spain, South Africa, the Dominican Republic, and Colombia.

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

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 or Johannesburg, South Africa, one semester
- School Year Abroad (SYA) in France, Italy, or Spain, full year (one semester is available if space permits)

COLLEGE COUNSELING

The college process is, first and foremost, an educational one: We encourage our students to explore new ways of envisioning themselves and think about future options they may not have considered before. It is also highly personal: finding the right college is about finding a good match. The rigorous academic program at Nightingale ensures that each of our graduates will be prepared to succeed in a challenging undergraduate curriculum.

Each year, 100% of Nightingale seniors are accepted to colleges designated as selective and most selective in the U.S. and abroad. College counseling begins with course selection in the Upper School to ensure that each student completes the courses recommended for college admission and graduation from Nightingale. The college office also assists with standardized testing recommendations and requirements for domestic and international colleges and universities. Throughout their Nightingale years, students are encouraged to challenge themselves in the classroom, explore and develop passion and expertise in their extracurricular interests, and 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 officially begins in the junior year. Students and their parents/guardians work with the college counselors to develop a list of colleges that are appropriate for each student. Through individual meetings and college counseling classes, the counselors assist students with:

- Understanding the application process
- Researching colleges
- Essay writing
- The financial aid process
- Interview prep

All of this is done in service of our overarching goals of

encouraging independence, developing mature decision-making skills for all of our graduates, and allowing each student to feel confident in their final college decision.
