Upper School elective courses provide students an opportunity to deepen their passions and to explore new ideas and skills. Students take two elective courses per trimester, an A day elective (Tues/Thurs), and a B Day elective (Weds/Fri). Each elective also meets on Mondays every other week. Students may change electives within the first week of the term. They receive a signup form in the summer to register for elective courses.

**Academic Departments**

- **Arts**
  - Middle School
  - Upper School
- **Humanities**
  - Middle School
  - Upper School
- **Math**
  - Middle School
  - Upper School
- **Science**
  - Middle School
  - Upper School
- **World Languages**
  - Middle School
  - Upper School

**Year-Long Courses**

- **Humanities**
  - Humanities 6: The United States and Human Geography
  - Humanities 7: The Individual and the World
  - Humanities 8: Human Rights
Humanities 9: United States Studies
Humanities 10: Ancient World Studies
Humanities 11: Modern World Studies
Humanities 12: United States in the World
English as a Foreign Language

Math
Math 6
Pre-Algebra
Algebra I
Geometry
Algebra II
Applied Math
Precalculus
AP Calculus AB/BC
AP Statistics
Multivariable Calculus

Science
Science 6: Earth Science
Science 7: Life Science
Science 8: Physical Science
Physics
Chemistry
Biology
Marine Science
Advanced Topics in Chemistry
Advanced Topics in Physics
Evolutionary Biology and Climate Change

World Languages
6th Grade World Language Program (Spanish & French IA)
Spanish IB
Spanish II
Spanish III
Spanish IV
Topics in Spanish and Advanced Topics in Spanish
French IB
French II
French III
French IV
Topics in French and Advanced Topics in French
Advanced Placement classes - Online
Trimester-long US elective courses, 2023-2024

Trimester 1

Tri 1 A Days
Fall Play Production
Vocal Technique
Painting
Creative Writing: Poetry
Social Movements and Changemakers
Food Science
Fitness

Tri 1 B Days
Ceramics
Advanced Band
Intro to Psychology
Improvisational Theater
The Art and Science of 3d Printing
Learning How to Learn: Upper School Learning Resource Period

Trimester 2

Tri 2 A Days
Health 10
Cabaret Band - Band Section
Digital Painting
Socratic Cinema
Audition Technique

Tri 2 B Days
Ceramics
Musical Theater Cabaret - Actors Section
Yoga
Robotics - Battle Bots
Learning How to Learn: Upper School Learning Resource Period
Yearbook

Trimester 3

Tri 3 A Days
Now and Zen
Ceramics
Technical Theater
Music Composition and Production

Tri 3 B Days
Miniature Sculpture
Musical Theater Stage Production
STEAM Explorations: Chemistry

Trimester-long US electives (offered in previous years)

STEM electives
Atmospheric Science
STEAM Explorations: Biology
STEAM Explorations: Chemistry
Coding
Advanced Topics in Chemistry
Multivariable Calculus
Robotics

Arts electives
Barrie Singers
Fall Play Production
Band
Musical Theater Cabaret / Cabaret Band
Design I
Musical Theater Stage Production
Music Composition and Production
Animals in Art
Audition Technique
Tonal Theory
Portraiture
Ceramics
Digital Painting

Humanities electives
Creative Writing: Poetry
Afro-Feminism and Womanism
Welcome to Hell
From the Board to the Sword: The Problem of Colonialism in Board Games
Ethical Dilemmas
Film Study: Bildungsroman
Bean There, Done That: The History and Mystery of Coffee
National History Day

Movement and Wellness electives
Yoga
Academic Departments

Arts

Middle School
The Middle School Arts Department provides every Barrie MS student with foundational skill building to continue their education in the arts. Each Middle School student takes one trimester each of Art, Music and Drama. These courses are meant to help students build skills in their disciplines to prepare for more specialized Upper School electives and productions. These courses are graded primarily on completing daily exercises that are meant to help all students progress from one level to the next within their artistic discipline. Each of these disciplines has a public presentation at the end of the trimester, whether it is a short one act play or performance, or offering selections of artwork completed over the course of the trimester to be displayed in the gallery.

Upper School
The MUS Arts Department is a core part of Barrie's foundational curriculum, putting into daily practice experiential learning. Active participation and experience is incorporated into every aspect of teaching and learning in the Arts. Students engage in authenticity and sustained inquiry through their preparation for performances and showcases, college, working artistry and a lifelong relationship with the arts. They develop their own voice and choice making ability through crafting their own artistic style and voice in personal and collaborative projects. Students demystify their own artistic process and practice through engaging in reflection, critique and revision. All students practice, publicly display and perform their artistic works, providing a developmentally appropriate gaze at challenging professional problems and practice.

The Upper School Arts Department aims to provide developmentally appropriate pre-professional experiences for our students. Students take trimester long courses that provide exploration into the artistic project or discipline aligned with the course. Within these courses, students develop their skill set, build resumes and portfolios, and learn the art of practice and rehearsal. Upper School Arts courses aim to reveal not only how to accomplish aesthetic skill within each discipline, but also how to connect and engage with ourselves, with one another, and with our environment through our artistic voice.

Humanities

Middle School
The Humanities Department believes that students can best understand the nuances of history by exploring the literature of a time period and a place, and that students can appreciate the intricacies of literature by learning history and geography. Our interdisciplinary program combines English language arts, literature, history, and other social
The Department seeks to build core skills across the Middle School through reading, writing, public speaking, and critical thinking. Our decolonized curriculum centers diversity, equity, and inclusion and extends from grades 6-12.

Upper School
The Upper School builds on the foundations established in the Middle School, blending project-based learning with a focus on the writing and research processes. Students learn how to grapple with multiple perspectives and conduct close readings of various source materials. Through the Humanities program, students learn to speak with clarity and confidence, write with depth and across genres, apply theory to analyze texts, and have the capacity to engage critically with the world around them.

Math

Middle School
Mathematics at Barrie School is designed to cultivate problem-solving skills and provide students with a universal tool for exploring the world around them in the 21st century. We believe that every student can find connections between their own lives and the mathematics they learn. In the middle school, our math program is centered on guiding students as they transition from concrete experiences to more abstract concepts focusing on developing strong number sense and reasoning abilities. We encourage students to think mathematically and explore problems through multiple representations, including verbal, numerical, graphical, and symbolic. We foster fluency in moving between these representations using both traditional paper-and-pencil methods and technology.

Upper School
Our math department is committed to helping students gain confidence in their growing mathematical abilities and recognize the value of mathematics in other scientific fields. We strive to create an inclusive learning environment where all students can thrive and develop a deep appreciation for the power of mathematics as a problem-solving tool.

In the Upper School, our curriculum emphasizes the interconnections between mathematics and other disciplines such as environmental justice, engineering, and social science. We highlight the practical applications of math and its role in problem-solving and analytical thinking. Our curriculum allows for different levels of abstraction and depth, catering to the needs and abilities of each student. Technology is integrated strategically to support learning and understanding.

Science

Middle School
The Science Department at Barrie is dedicated to nurturing students' confidence as budding researchers and experimenters. Classrooms are guided by a philosophy of learning by
Middle School students conduct investigations that will prepare them for the world as citizen scientists through the use of Barrie’s 45-acre campus. Guided by the principles of environmental stewardship, explorations into the three core middle school sciences include a deep understanding of both the laboratory bench and the environment. Students participate in a variety of hands-on activities such as the creation of mousetrap cars and trebuchets, the exploration of invasive species, observations of enclosed ecosystem bottles, and the growth of geodes. Students also have the opportunity to participate in a signature experiential education program, such as at the research site Chincoteague Bay Field Station on Wallops Island, VA.

Upper School

The goal of the Science Department at Barrie is to provide students with the confidence to thrive in the Sciences across all disciplines. In our classrooms, we combine lab and inquiry-based experiences with Project Based Learning in a curriculum that is aligned with the Next Generation Science Standards (NGSS). Students design and conduct experiments, present research, and participate in field experiences throughout grades 9-12.

Each course is intentionally designed to build on prior knowledge and deepen students’ understanding of both content and skills, by building upon previous courses. Students learn how to write lab reports focusing on experiments they have designed, learn to problem-solve with collaborators, design experiments, and learn how to conduct and present research. Science classes feature opportunities for students to be innovative and develop investigative skills needed for college and the workforce.

World Languages

Middle School

The World Language Department connects language learning, cultural exposure, and appreciation of the richness of Spanish- and French-speaking worlds. Starting in Grade 6, World Language is required for all students; they have the opportunity to study Spanish or French. Through the input-based teaching method Total Proficiency through Reading and Storytelling (TPRS), students immerse themselves in the target language and learn by acting out scenarios, reading accessible context, and engaging with real-world issues. Beyond the goal of content mastery, students develop critical thinking skills and effective language acquisition strategies that facilitate learning and application of linguistic skills outside of the school setting. Students develop as speakers, listeners, readers, and writers as they gain an understanding of and sensitivity to the cultures of the target language.

Upper School

In order to make a positive impact in an increasingly diverse world, we believe that students should become proficient in Spanish or French while at Barrie. Classes are guided by Total Proficiency through Reading and Storytelling (TPRS), which uses storytelling as a teaching
tool. Students learn by reading engaging material that cover complex social topics such as liberatory pedagogy in the Americas, military dictatorships in Argentina, and first-hand accounts from immigrants in the U.S. By building a community of practice, students develop the capacity to facilitate dialogue on complex issues in an ever-shifting world.

**Year-Long Courses**

**Humanities**

**Humanities 6: The United States and Human Geography**

Humanities 6 is Barrie’s introduction to humanities and human geography. Units are organized around a central text and include opportunities for students to develop important skills such as annotation, note-taking, discussion, critical thinking, and argumentation. In one example, after reading *Out of the Dust*, students explore the history of the Dust Bowl and discover how humans both caused and were impacted by that ecological event. In another, students read *Uprising* and watch *Newsies* in order to investigate the push-and-pull factors of immigration to the United States, the living and working conditions in New York, and the importance of youth activism in bringing about social change. Through the Montessori Model United Nations program, students practice research, problem-solving, and collaboration as they represent a country at the annual conference in New York City.

**Humanities 7: The Individual and the World**

In this class, students will explore world geography through the lens of ancient civilizations, environmental justice, and culture. The course will begin by using the five themes of geography to create a travel brochure and plan a trip to a location of their choice. The course will examine a variety of locations in West and East Africa, Central and South America, and the United States to better understand the culture and experiences of people from the past to the present. The students learn the mechanics of writing an essay and letter formatting by analyzing a variety of texts on books such as *Same Sun Here*, *Akata Witch*, and *Harbor Me*. The students will conduct multiple research projects exploring the geography of locations in novels such as *When Stars are Scattered*. The students will also gain an understanding of the formation of rivers and the impact this had on the development of ancient civilizations to produce a project on the current impact of pollution. At the end of the year, the students will write and present a TED Talk on a topic addressing environmental justice.

**Humanities 8: Human Rights**

Humanities 8 introduces students to the concept of human rights, how people have sought justice around the world, and the causes and consequences of human rights violations. To this end, students learn the geography, history, and culture of five times and places: 20th-century China, Europe from 1914-1945, West Africa and the Caribbean under colonization and decolonization, and the United States Civil Rights Movement. All Humanities 8 students undertake an expedition to Georgia and Alabama to discover the
legacy of the Civil Rights Movement firsthand. Memoirs, including those of Melba Patillo Beals, Elie Wiesel, Julia Alvarez, and Da Chen, feature prominently in this course. Literary texts include Things Fall Apart, Abina and the Important Men, The Book Thief, and many short stories. In the spring trimester, students will focus on poetry, writing and performing original works in Barrie's long-running Poetry Slam. Additional projects include rewriting a standard historical textbook, an in-depth exploration of whether people are essentially good, and what the future holds for rights and responsibilities.

**Humanities 9: United States Studies**

In this class, students will explore United States history through the lens of diplomacy and democracy. The course will thematically explore the experiences of diverse groups of people and the liberties granted to or withheld from them. The year will begin by exploring their own identity, familial history, and where their family has been situated in major historical events in their genealogy project. This project grounds the students for the remainder of the content that we will explore around historical moments, policies, and experiences in United States history. The students will use this framework and historical research methods to conduct a variety of research projects throughout the year based on the creation of social ideologies, and political and governmental systems in the United States. The students will also work through an intensive analytical writing workshop to help them create a thesis statement, select nuanced supporting evidence, and analyze literature beyond the literal meaning of the text to produce a sophisticated essay. The students will read a variety of texts and short stories centering multiple perspectives and identities such as. All My Rage, Stamped, The Crucible, The 57 Bus, They Called Us Enemy, All Quiet on the Western Front, and more.

**Humanities 10: Ancient World Studies**

This course focuses on the earliest iterations of human society and culture. Beginning with prehistory and the emergence of humans, students in this class will explore what makes people different and what binds us together throughout space and time. They will read the stories that reflect, affirm, and – in some cases – dictate the values of a particular society, giving special emphasis to mythology and epics. Students will be challenged to determine where they can turn to find evidence of these early societies, and how they can responsibly interpret that evidence. The curriculum is framed by an investigation into the ancient and medieval worlds through four lenses of geographical patterns: human migrations; invention and the environment; religious landscapes; and expanding territories and trade networks. At the end of the year, students will apply the skills they have developed throughout the year by completing the capstone project: the major research essay.

**Humanities 11: Modern World Studies**

This course examines the systems and forces that have shaped the world in recent centuries, and how human beings have responded through literary and artistic expression. Humanities 11 begins with the present moment and asks, “Just how did we get here?” It then turns back the clock and examines the emergence of an integrated world system out of the
many disparate regional and local systems of the 14th and 15th centuries, and hones in on the social, political, economic, and intellectual developments that accompanied that emergence and that continue to shape contemporary societies around the world. The course seeks to actively counter Eurocentric tellings of modern cultural and historical developments through taking an intentionally global perspective and highlighting the voices and experiences of marginalized peoples. Along the way, students encounter a variety of “texts” – journals, poems, plays, novels, art, movies, shows, cartoons, Super Bowl ads and much more – that help us appreciate how people have grappled with questions of identity and belonging, beauty and tragedy, love and loss, in an ever-changing world.

**Humanities 12: United States in the World**

Humanities 12 incorporates the previous three years of Humanities study into a consideration of the role of the United States in the world at large, examining American political science, modern history, and foreign policy through cross-curricular literature-based units. Students will learn to apply structuralist, feminist, racial justice, economic, postcolonial, and additional theoretical perspectives to their readings. Topics of study include the U.S. government, Brazil, the rise of conspiratorial thinking, and mass incarceration in the United States. This course explores works by a range of authors, including Michelle Alexander, George Saunders, Tara Westover, Jorge Amado, and William Shakespeare. There is a major short story reading and writing unit as well. All Humanities 12 students write an in-depth research essay on a topic of their choosing. Projects include an examination of the inner workings of a governmental entity, a contemporized production of a Shakespeare play, and a simulation of the International Criminal Court.

**English as a Foreign Language**

The purpose of EFL is to introduce students to American culture and language through idioms, novels, poetry, short stories, and art. Students will focus on the study of the American and self-identity, working individually and in groups to learn about maintaining their own identity within the American experience. Students will also be responsible for learning vocabulary in context, writing a five paragraph essay, and practicing concepts in grammar. Public speaking and participating in community service projects will also be a focus. Editing for errors in their writing will be an overarching topic for the entire year. EFL students will learn about food insecurity in the local area and nationwide. They will volunteer at a local food bank and manage a schoolwide food drive in order to donate what they collect to a local food pantry. While EFL at Barrie School is not a place where students come to learn English, it is a class where students can feel comfortable asking questions and bonding with their international peers. Some curriculum is created to meet the needs of other teachers in their other classes and can run as a time for students to get extra help in researching and writing.
Math

Math 6
Math 6 is a comprehensive course designed to build a strong foundation in mathematical concepts and skills for sixth-grade students. Through engaging lessons, problem-solving activities, and real-world applications, students will develop critical thinking abilities, numerical fluency, and a deep understanding of various mathematical topics. This course will empower students to apply mathematical principles to solve problems, analyze data, and make informed decisions.

Pre-Algebra
Pre-Algebra is a foundational course designed to provide students with the necessary skills and knowledge to excel in algebra and other advanced mathematical disciplines. This course focuses on developing a solid understanding of fundamental mathematical concepts and applying them to solve real-world problems. Through engaging lessons, interactive activities, and meaningful applications, students will enhance their critical thinking abilities, numerical fluency, and mathematical reasoning.

Algebra I
Algebra I is a comprehensive course designed to introduce students to the fundamental concepts and skills of algebra. Through a combination of review, exploration, and problem-solving, students will develop a solid foundation in algebraic reasoning, critical thinking, and mathematical proficiency. This course serves as a stepping stone for further study in algebra and related mathematical disciplines.

Geometry
Geometry is an in-depth course designed to explore concepts and applications in geometry. Through a combination of rigorous theoretical discussions, problem-solving exercises, and hands-on explorations, students will deepen their understanding of geometric relationships, spatial reasoning, and mathematical proof. This course aims to cultivate critical thinking skills, analytical reasoning, and the ability to construct logical arguments. Geometry serves as a foundation for further study in geometry and related mathematical disciplines.

Algebra II
Algebra II is an intensive course designed to provide students with an in-depth understanding of advanced algebraic concepts. Through the exploration of topics such as radical functions, conic sections, sequences and series, trigonometry, and probability, students will develop advanced problem-solving skills, critical thinking abilities, and a deeper understanding of mathematical concepts. This course aims to prepare students for higher-level mathematics courses and provide a solid foundation for future studies in algebra and statistics.
Applied Math

Applied Math, which covers topics from both Algebra II and Statistics, is a comprehensive course that combines the study of algebraic concepts with an introduction to statistical analysis. This course builds upon the foundation of algebra and equips students with the necessary skills to solve complex equations and inequalities, analyze functions, and interpret statistical data. Through a combination of theoretical discussions, problem-solving exercises, and data analysis, students will develop critical thinking abilities and gain a deeper understanding of algebraic and statistical concepts. This course aims to prepare students for higher-level mathematics courses and provide a solid foundation for future studies in algebra and statistics.

Precalculus

Precalculus is a comprehensive course designed to bridge the gap between algebra and calculus, providing students with the necessary tools and concepts to succeed in advanced mathematical studies. Through the exploration of topics such as composite and inverse functions, trigonometry, complex numbers, rational functions, conic sections, vectors, matrices, probability and combinatorics, series, limits, and continuity, students will develop critical thinking skills, analytical reasoning, and a deeper understanding of mathematical concepts. This course serves as a solid foundation for further study in calculus and related disciplines.

AP Calculus AB/BC

AP Calculus is a rigorous course that covers both differential and integral calculus, providing students with a deep understanding of calculus concepts and their applications. Through the exploration of topics such as limits and continuity, differentiation, integration, differential equations, and their various applications, students will develop advanced problem-solving skills, analytical reasoning, and a strong foundation in calculus. This course prepares students for the AP Calculus AB or BC exam, as well as future studies in mathematics, engineering, or other STEM disciplines.

AP Statistics

AP Statistics is a comprehensive course that provides students with a deep understanding of statistical concepts and methods. Through the exploration of topics such as data exploration, data collection, probability, random variables, sampling distributions, and inference for categorical and quantitative data, students will develop critical thinking skills, analytical reasoning, and a strong foundation in statistical analysis. This course prepares students for the AP Statistics exam and equips them with the necessary tools to interpret and analyze data in various fields.

Multivariable Calculus

Multivariable Calculus is an advanced course that builds upon the concepts of calculus and extends them to functions of multiple variables. Through the exploration of topics such as derivatives of multivariable functions, applications of multivariable derivatives, integration of
multivariable functions, and the study of vector fields using Green’s, Stokes’; and the divergence theorems, students will develop a deep understanding of calculus in higher dimensions. This course equips students with the tools to analyze and solve problems involving functions of multiple variables, vector fields, and their applications in physics, engineering, and other scientific disciplines.

Science

Science 6: Earth Science

Earth Science is an investigation of our planet, starting from the center and moving out through the layers to the surface before traveling through the atmosphere and into space. The first trimester focuses on the processes at the center of our planet and the science of how knowledge is constructed. In the second trimester, we move on to Earth’s history, the creatures that have inhabited it across geologic time scales, and the brief period our species has shared it. In the third trimester, we travel from the surface, looking at the processes of the water and carbon cycles, through the atmosphere and into space. We finish the year discussing our place in the universe and the wondrous processes that got us here.

Science 7: Life Science

Life Science is an investigation of all living things and the habitats that they call home. Students will use and learn the scientific method throughout this class to conduct investigations into how and why organisms function. The first trimester of the course will focus on how to conduct experiments and investigations, learn what it means to be alive, and explore the basic principles of ecology. Students will design their own experiments, create and maintain an ecosystem in a bottle, and investigate the impact of invasive species on ecosystems. The second trimester focuses on cells, cellular processes such as creating energy, and the transfer of information. The third trimester of the class focuses on how organisms change through genetic processes, mutations, and evolution. Students will engage in laboratory investigations to support these explorations throughout the year.

Science 8: Physical Science

Physical Science 8 blends fundamental physics concepts with crosscutting scientific and engineering practices to support students in developing usable knowledge to explain real-world phenomena. Performance expectations focus on developing understanding of several scientific practices; developing and using models, planning and conducting investigations, analyzing and interpreting data, using mathematical and computational thinking, constructing explanations, and using these practices to demonstrate understanding of content, which are grounded in ideas about motion and Newtonian Physics. Students are also expected to gain understanding of several engineering practices, including iterative design and design evaluation. In addition, students will also be introduced to Computer Science (CS) through programming and robotics. The robotics portion of this course is designed to provide an opportunity to grasp abstract coding concepts with tangible physical outputs using robotics mechanisms.
Physics

9th grade Physics & Astronomy students spend the year studying the fundamentals of physics, the scientific method, and the relationship between math and science. The course culminates in an astronomy unit that leads students to conclusions about our place in the universe through hands-on activities, field trips to museums and planetariums, and participation in citizen science. Students complete a number of labs, mini-labs, and projects that are geared towards student interest and demonstrate the role that physics plays in everyday life. In Trimester 1, the class studies 1-dimensional and 2-dimensional motion through the lens of various forms of media, including movies, TV shows, and video games. Students begin Trimester 2 with a project that allows students to explore the relationships between force, surface area, and pressure through constructing a bed of nails. Students end Trimester 2 by learning about experimental design and contributing to a class-created database. The third trimester takes students through the history of astronomy, with a final astrobiology project that weaves together foundational concepts at the close of the school year.

Chemistry

Chemistry is the study of matter and its interactions. In tenth-grade chemistry students investigate the physical and chemical interactions of elements, compounds, and molecules. Starting with the center of the atom, students learn about the interactions between the nucleus and electron shells, then explore how these interactions lead to bonding and the formation of compounds and molecules. In the second trimester, students discover how different types of chemical reactions take place. In the third trimester, students explore the chemistry behind a contemporary social issue or event. For example, past years have done a deep dive into the global impact of teflon and the sustainability of corn-based fuel ethanol.

Biology

Biology is the study of life and the functions of life. In this course, students will begin investigating the functions of life from a microscopic level, focusing on organic compounds and cells, to a macroscopic level centered on topics such as classification and evolution. The first trimester of the course involves hands-on applications of the scientific method, including investigations into the role of organic molecules, the maintenance of functions and characteristics of life, and cellular structures. The second trimester is an exploration of cellular processes such as transport, growth, reproduction, and energy production. The final trimester of the year focuses on topics such as human genetics, production of proteins, and the process of identifying ancestral lines. Students will conduct various projects at home and in the classroom to reinforce their knowledge of the topics through experiential learning.

Marine Science

Note: Offered every other year.

Marine Science challenges students to think about our relationship with the world's oceans. They will come to understand that our oceans are responsible for regulating global
temperature and providing food for the world’s population as well as habitats for many different species. Students investigate the impact of climate change on coral reefs, bring awareness to the Barrie community about plastic pollution, and investigate environmental issues such as the collapse of fisheries. Students will actively participate in field research, collect data at local beaches, interview aquarists and marine biologists about current practices, and investigate current local, national, and international policies.

**Advanced Topics in Chemistry**
*Note: Offered every other year.*

Advanced Topics in Chemistry is a research-based seminar course for juniors and seniors. Past projects have included a novel filter for removing lead from drinking water and an in-situ Ultraviolet-visible (UV-vis) spectrochemical pH meter for freshwater environments. In 2023-2024, students will work on constructing in-situ filtration systems for the extraction of mercury from aquatic environments. This course is open to students who have passed Chemistry with a B or higher.

**Advanced Topics in Physics**
*Note: Offered every other year.*

Advanced Topics in Physics will explore how the natural laws of the universe influence the world around us. Students will begin the year by learning how mathematics can be used to represent real-life phenomena and will continue on to apply this math during studies of motion, Newton’s Laws, springs, waves, and rotational motion. Students enrolled in this course will experience a wide range of different labs and hands-on projects that use the scientific method as a guiding principle. Class projects will involve experiments on friction and rotational momentum, such as creating wifi extenders for Barrie’s campus, measuring the transfer of energy through different mediums, and making sound waves through PVC pipe instruments.

**Evolutionary Biology and Climate Change**
*Note: Offered every other year.*

This course will explore the mechanisms behind evolution and adaptation, the history of climate change over the earth’s history, and the overlapping scientific connections between these two topics. The impact of climate change will be explored through various laboratory activities, research essays, and investigations into case studies. The end of the year will consist of investigating current U.S. and international climate change policy, with students developing recommendations for future environmental management and protocols.

**World Languages**

6th Grade World Language Program (Spanish & French IA)
ACTFL Proficiency Level: Novice Low
In 6th grade, students have the opportunity to explore both French and Spanish. Each student takes one trimester of Spanish IA and French IA. The department uses the methodology of Teaching Proficiency through Reading and Storytelling (TPRS) to teach fundamental grammatical structures, vocabulary, and pronunciation with a focus on comprehension. Emphasis is placed on the most frequently used words in the each language, and this approaches positions students to become conversationally proficient swiftly and effectively. Students practice speaking, demonstrating leadership skills, and engaging in teamwork by collaboratively shaping stories and enacting various character roles.

Sample Texts:
- *El Capibara con Botas* by Mira Canion
- *Edi l'éléphant* by Emily Ibrahim

**Spanish IB**

ACTFL Proficiency Level: Novice Mid

The Spanish IB class follows the IA class and provides the second year of a sequential middle-school language program. Building on fundamentals introduced in IA, the Spanish IB class continues to use the TPRS (Teaching Proficiency through Reading and Storytelling) methodology. Students learn vocabulary in context, grammar structures through comprehension-focused lessons, and pronunciation through role-playing activities.

Sample Texts:
- *Tumba* by Mira Canion
- *Agentes Secretos y El Mural de Picasso* by Mira Canion

**Spanish II**

ACTFL Proficiency Level: Novice High

Spanish II reinforces the grammar and vocabulary learned in Spanish I while continuing to develop students’ speaking, listening, reading, and writing skills. Special attention is paid to storytelling in the present and past tenses, which the students are exposed to through accessible and engaging stories. Stories introduce new words and sentence structures in context, and students also engage in collaborative projects that deepen their familiarity with distinct cultural traditions and practices. In this class, students complete more independent reading and have the opportunity to engage with advanced texts about various topics like bird trafficking in Costa Rica or the legend of La Llorona.

Sample Texts:
- *Berto y Sus Buenas Ideas* by Magaly Rodriguez by Nivel Elemental
- *La Vampirata* by Mira Canion
- *Amigos Detectives* by Patricia Verano
Spanish III
ACTFL proficiency level: Intermediate Low

In Spanish III, students are encouraged to exhibit adaptability, initiative, and a positive attitude towards risk-taking by exploring more complex concepts in an immersive learning environment. Global perspective, integrity, and empathy are taught through more authentic encounters with Spanish-speaking cultures, and the class underscores the importance of global diplomacy. Students engage with primary source materials such as film, music, television, newspapers, and magazines. Reading several full length mini-novels develops literacy skills that enrich students' understanding of language and culture. Trimester and short research projects encourage the use of digital technologies, creativity, and analytical thinking.

Sample Texts:

- *Felipe Alou* by Carol Gaab
- *Ojos de Carmen* by Veronica Mocoso
- *Viviana y Su Gran Aventura Mexicana* by Abby Kanter

Spanish IV
ACTFL proficiency level: Intermediate Low

In Spanish IV, students explore more complex concepts in an immersive learning environment. Students participate in studies of high-level literature, film, and other real-world artifacts to enrich their understanding of Spanish-speaking cultures and countries. Students are expected to speak predominantly Spanish in the classroom and engage with a variety of target-language materials. The novels students read at this level dive into complex socio-historical and political topics like the Cuban Revolution and the military junta in 20th century Argentina. Students are able to couple their language learning with an assessment of historical contexts, and they communicate in the target language through seminars, projects, and essays.

Sample Texts:

- *Libertad* by Rita Barrett
- *La Guerra Sucia* by Nathaniel Kirby

Topics in Spanish and Advanced Topics in Spanish
ACTFL proficiency level: Intermediate Mid

In this course, students build on their knowledge of the Spanish language, significantly expand their Spanish vocabulary, and augment their understanding of the cultures and social issues that impact the Spanish-speaking world. This course can be taken more than once, as precise topics change from year to year. While covering a variety of themes, the course delves into topics like invention, discovery, global issues, and diplomacy. In order to
expose students to as much authentic speech as possible, classes are conducted in Spanish. Through engaging activities that emphasize meaningful communication and cultural exchange, students develop increasingly sophisticated language skills. Classroom activities incorporate grammar practice through literary readings, listening exercises, in-class writing prompts, journals, formal essays, presentations, music, multimedia, cinema, and other engagements grounded in project-based learning. This course will sharpen proficiency and increase awareness of the Spanish-speaking world.

Sample Texts:
- *La Lengua de Las Mariposas* by Manuel Rivas
- *La Hija del Sastre* by Carol Gaab and Carrie Toth

**French IB**

ACTFL Proficiency Level: Novice Mid

French IB follows French IA as the second half of French I, which is split into two years in the Middle School. The World Language Department uses the TPRS (Teaching Proficiency through Reading and Storytelling) methodology to teach grammar, vocabulary, and comprehension. Role-playing and situated dialogue are important ways of developing an understanding of foundational linguistic features and sentence structures at this level.

Sample Text:
- *Émeraude, Le Bébé Tortue Marine* by Kristy Placido

**French II**

ACTFL Proficiency Level: Novice High

In French II, students focus on building their understanding of the French language and cultures of the French-speaking world developed in French I. Students deepen their knowledge of French vocabulary and grammar through the use of authentic materials. This class includes exposure to videos, novel excerpts, graphic novels, poetry, news articles, and other sources that allow students to practice reading, writing, listening, and speaking. Students work on varied projects and activities on topics such as French cuisine, fashion, architecture, sports, animals, and cities.

Sample Texts:
- *Kiffe Kiffe Demain* by Faïza Guène
- *Le Petit Prince* by Antoine de Saint-Exupéry

**French III**

ACTFL Proficiency Level: Novice High
In French III, students develop greater expertise with the language and build on their existing knowledge about the cultures and the major figures of the French-speaking world. Students encounter more complex texts and concepts across film, media, music, radio, podcasts, extracts of novels, and other media. By completing mini-research projects, students learn more about the cultures of the French-speaking world, while improving their skills as readers, writers, listeners, and speakers.

Sample Texts:
- *Le Petit Nicolas* by Sempé
- Excerpts from novels by Marie NDiaye

French IV
ACTFL proficiency level: Intermediate Low

In French IV, students will be encouraged to engage in more complex conversations in the target language and develop fluency as readers, writers, and world-builders. They will learn by researching topics such as documenting and presenting on the flora and fauna that inhabit our 45-acre campus. Students learn to engage with one another in discussions about literature, culture, sports, art, and contemporary society. They also interpret detailed information when listening, reading, and learning about the various experiences of the people who speak this modern world language.

Sample Texts:
- ‘Journal d’un criminologue angoissé’ by by Tahar Ben Jelloun
- Poetry by Victor Hugo

Topics in French and Advanced Topics in French
ACTFL proficiency level: Intermediate Mid.

In this course, students deepen their understanding of vocabulary and the cross-cultural issues that pertain to French-speaking countries. Students may take this class multiple times, as course topics will vary from year to year. Students may learn through mediums such as art, cinema, journalism, sports, ecology, cuisine, and literature to help expand students capacity for perspective-taking and capacity to navigate complex social issues.

Sample Texts:
- Excerpts from *Ségou* by Maryse Condé
- Excerpts from *À La Recherche du Temps Perdu* by Marcel Proust

Advanced Placement classes - Online
In addition to the multiple advanced, college-level courses taught by Barrie teachers, students have the option of taking AP courses online in other subjects. Students hoping to do so need to express interest directly to the Dean of Studies and College Counselor. A list of available online APs may be found here.

**Trimester-long US elective courses: 2023-2024**

**Trimester 1**

**Tri 1 A Days**

**Fall Play Production**
Prerequisites: Audition / tech interview for the fall play; required for all fall play cast and crew

*I knew that what I wanted to do in the theater was to recreate moments I remembered as a boy preacher, to involve the people, even against their will, to shake them up, and hopefully to change them." - James Baldwin*

This course will focus on rehearsing and mounting all performance aspects of the fall play. Students will explore the process of creating a full length play, from tablework through strike, mirroring a professional experience. In class, students will have the opportunity to analyze the script, build clear characters, make informed choices, learn and review music, block and choreograph. Students will also help bring the technical aspects of the performance to life and strengthen their skills as designers. By the end of the trimester, students will feel prepared to confidently perform and run the fall play.

**Vocal Technique**
Prerequisites: Entry-level

This entry-level course teaches foundations of vocal technique including: breath support, pitch matching, connectivity, and vocal placement. This course is an introduction to singing with accuracy, emotion – and without fear. There is no public performance requirement outside of in-class repertoire and master classes (although public performance is encouraged). Vocal Technique I is intended for students who want to become more comfortable with their singing voice; no prior experience is required for this course, however, additional repertoire and performances may be required for more advanced students. This course may be recommended for students who wish to gain experience with their voice so they may eventually matriculate to more advanced courses such as: Musical Theatre Cabaret, or Musical Theatre Stage Production.
Painting
Prerequisites: None

In this trimester elective, students will explore painting media and concepts. A variety of techniques will be demonstrated for watercolor, acrylic, and water based oil paint, and there will also be time set aside for experimentation. Additionally, students will learn about different painting substrates, including learning to stretch and prime their own canvases which allows more flexibility in scale and format. Conceptually, students will be shown and discuss many different examples of painting subjects and compositions, which they will use as inspiration for their own work. Several projects will focus on observation, but there will also be some time to learn about and explore abstract and expressive painting.

Creative Writing: Poetry
Prerequisites: None

Poetry can change the way we see the world; it can break new ground for language; it can open hearts and minds with a softly spoken word or a transcendent turn of phrase. This is a course for writers – songwriters, poets, and anyone who wants to write more effectively. Throughout the trimester we’ll cover key poetic devices by studying poetry from a handful of modern poets, and we’ll try our own hands at writing new poems from a select number of prompts. Students will have the opportunity to workshop their own writing, getting feedback on their drafts and working towards more polished poetry. This course serves as either an introduction to writing poetry or the next level for students who have already taken this class.

Food Science
Prerequisites: None

You may have heard people say that cooking is an art, but cooking is just as much chemistry, physics, and biology as it is an art form. In this course we will study contemporary food scientists that double as entertainers to make the science accessible to the general public, such as Food Network icon and legend Alton Brown, famous restaurateur and author J. Kenji Lopez-Alt, and Youtuber/podcaster Adam Ragusea. We will also learn about older food scientists such as Louis Pasteur and the history of food science that has brought us to today, where being a food scientist is a career path that many people choose to follow. Most importantly, we ourselves will become amateur food scientists, carry out our own experiments, and make (hopefully) delicious food!

Fitness
Prerequisites: None

This class will introduce students to the fundamentals of safe and healthy exercise for fitness. Daily routines will include lessons on safety and kinesiology, as well as
weight-bearing body weight, free weight, and cardiovascular exercise. An emphasis will also be on creating a safe, healthy culture of exercise at Barrie and beyond.

**Tri 1 B Days**

**Ceramics**
Prerequisites: None

In this class, students will learn vocabulary, processes, and essential techniques to make successful ceramic sculpture. The focus of the course will develop hand building techniques to create both functional and decorative artwork. Students will work with Pinch, coil, slab, and surface decoration techniques. Once a week, students will have the opportunity to work on the potter's wheel, learning to throw basic forms such as bowls and cylinders. Students will research pottery from different cultures to be used as inspiration for projects and presentations. Students may take this class more than once, and assignments will be modified to challenge more experienced students.

**Advanced Band**
Prerequisites: Audition

This serves as a band course for Barrie's advanced musicians. This course will culminate in one or more community performances in rock / contemporary quartets or quintets. This course has an audition requirement, where students are expected to demonstrate prior knowledge of their instrument. This course is meant to prepare students for a half hour set within their given band group. Opposite day to Design.

**Intro to Psychology**
Prerequisites: designed for 9/10th graders interested in taking advanced psychology offerings

This elective is intended for 9th or 10th grade students interested in a preview of the information covered in advanced psychology courses. We will spend approximately one week per unit that will be covered and will provide a general overview of human psychology, behavior, and decision making.

**Improvisational Theater**
Prerequisites: None

*The rules of improvisation apply beautifully to life. Never say no - you have to be interested to be interesting, and your job is to support your partners. - Scott Adsit*

This class will introduce the fundamental concepts of improvisation, where the characters and plot are made up in the moment. Through a series of improvisational games and short-form exercises, students will hone their active listening skills, ability to follow impulses
and collaborate as a member of an ensemble. By the end of the course, students will perform in small troupes of improvisers to put on live improvised shows.

**The Art and Science of 3d Printing**  
Prerequisites: None

Students will use a 3D modeling program to design and build something useful. They will then create the supports to print their product to ensure proper printing. Finally, they will print their product on the 3D printer. The end-of-trimester assessment will be a finished product they will use daily.

**Learning How to Learn: Upper School Learning Resource Period**  
Prerequisites: None

This class will focus on supporting students in developing work organization and planning skills. It will utilize curricula centered on building learner self-understanding, skill, and strategies for getting high quality work done on time and in full.

**Trimester 2**

**Tri 2 A Days**

**Health 10**  
Required for all 10th graders

Health is based on a discussion and participation model that reflects understanding and comprehension centered on educational standards developed by Maryland Comprehensive Health Education Framework and the CDC. Both are designed to provide adolescents with a holistic education to support their healthy development. Students explore topics pertaining to mental and emotional Health, the impact of technology and social media on adolescent health, positive and unhealthy human relationships, human anatomy, sexual education and identity, safety and violence prevention, and substance use prevention. Our mission for Health is to foster a community grounded in respect and safety so that our students feel empowered to have these discussions while encouraging transparency and closeness.

**Cabaret Band - Band Section**  
Prerequisites: Audition

*Performance art is about joy, about making something that's so full of a kind of wild joy that you really can't put into words.* - Laurie Anderson

Musical Theatre Cabaret is an advanced by audition only course that ends with a performance at Arts Night. Students in Cabaret (Theatre Section) will be given scenes and
songs to learn from different musical theater shows to perform at the culminating recital. Students in the Cabaret (Band Section) will learn band arrangements to support the singers as a musical theater orchestra pit for the performance at the culminating recital. Both sections of Musical Theatre Cabaret are by audition only.

**Digital Painting**
Prerequisites: None

In this art class, students will learn to draw, paint, sculpt, and collage using digital tools such as photoshop and procreate. We will work on iPads as well as desktop computers with pressure sensitive Wacom tablets and styli. Subjects for assignments will be student driven but will use life references and imagination as inspiration. Examples of projects could be: paint an alien landscape or create a comic that shows the same character from at least three different views. Students may take this class more than once.

**Socratic Cinema**
Prerequisites: None

Do you like movies? Do you like discussing movies and ideas? Have you ever wondered what philosophy is? If you answered “yes” to any of these questions, you should definitely sign up for Socratic Cinema! In this course we’ll explore fundamental philosophical concepts through the lens of popular films. Along with watching movies, we’ll read introductory passages in philosophy and spend time on written reflections. Films include: Groundhog Day, The Truman Show, and The Matrix.

**Audition Technique**
Prerequisites: None

_"All you have to remember is that ‘audition’ is synonymous with ‘opportunity.’ I mean, if you absolutely hate auditioning, do you also hate opportunities? That wouldn’t make much sense." - Hilary Swank_

This course aims to demystify the process of auditioning for a play or musical and help students find joy in auditioning. Finding material, resume building, taking headshots, wearing proper audition attire, and participating in dance calls are all learned skills that will be explored. Each week, students will prepare for and participate in mock auditions for different types of productions. By the end of the course, students will have acquired enough material to go out on auditions as more confident and prepared performers.

**Tri 2 B Days**

**Ceramics**
Prerequisites: None
In this class, students will learn vocabulary, processes, and essential techniques to make successful ceramic sculpture. The focus of the course will develop hand building techniques to create both functional and decorative artwork. Students will work with Pinch, coil, slab, and surface decoration techniques. Once a week, students will have the opportunity to work on the potter's wheel, learning to throw basic forms such as bowls and cylinders. Students will research pottery from different cultures to be used as inspiration for projects and presentations. Students may take this class more than once, and assignments will be modified to challenge more experienced students.

**Musical Theater Cabaret - Actors Section**

Prerequisites: Audition

*Performance art is about joy, about making something that’s so full of a kind of wild joy that you really can’t put into words.* - Laurie Anderson

Musical Theatre Cabaret is an advanced by audition only course that ends with a performance at Arts Night. Students in Cabaret (Theatre Section) will be given scenes and songs to learn from different musical theater shows to perform at the culminating recital. Students in the Cabaret (Band Section) will learn band arrangements to support the singers as a musical theater orchestra pit for the performance at the culminating recital. Both sections of Musical Theatre Cabaret are by audition only.

**Yoga**

Prerequisites: none

Students will learn the basic poses of yoga, including the Sun Salutation Sequence. Yoga is practical and can be adapted to anybody, and it will help reduce stress. Techniques will be used that you can apply during the day before a test or a presentation. If you've tried yoga before or if you haven't you're welcome to join.

**Robotics - Battle Bots**

Prerequisites: none

Students will build robots that can incapacitate each other without blades or projectiles. They will work in teams of up to three, building and coding the robots. The end-of-trimester assessment will include a battle royal at an assembly.

**Learning How to Learn: Upper School Learning Resource Period**

Prerequisites: None

This class will focus on supporting students in developing work organization and planning skills. It will utilize curricula centered on building learner self-understanding, skill, and strategies for getting high quality work done on time and in full.
Yearbook
Prerequisites: None

In this elective, students will take an active role in creating the school’s yearbook commemorating the year’s memories and events. Students will gain skills in publishing, layout, photography, and design and work collaboratively to make decisions about the book’s theme and content and to meet publishing deadlines. Some students will need to attend school activities and events in order to write stories and take photographs.

Trimester 3

Tri 3 A Days

Now and Zen
Prerequisites: None

Simplicity. Going with the Flow. Letting Go. Harmony. How can basic principles of Eastern Philosophy and Religion inform and inspire our lives? Let’s explore together! This course introduces students to fundamental concepts in Hinduism, Buddhism and Taoism. As we encounter a variety of profound perspectives offered by philosophers and mystics of the East, our studies will benefit from off-campus experiences to the Wat Thai Temple that neighbors our school. Our time together will involve games for promoting mindfulness, playful assignments and reflective journal entries.

Ceramics
Prerequisites: None

In this class, students will learn vocabulary, processes, and essential techniques to make successful ceramic sculpture. The focus of the course will develop hand building techniques to create both functional and decorative artwork. Students will work with Pinch, coil, slab, and surface decoration techniques. Once a week, students will have the opportunity to work on the potter’s wheel, learning to throw basic forms such as bowls and cylinders. Students will research pottery from different cultures to be used as inspiration for projects and presentations. Students may take this class more than once, and assignments will be modified to challenge more experienced students.

Technical Theater
Prerequisites: None

The designer does not begin with some preconceived idea. Rather, the idea is the result of careful study and observation and the design of a product of that idea. - Paul Rand
In this course, students will explore the fundamental areas of theatrical production design (set, lights, sound, props, costumes, projection), and how production designers use their skills to help tell compelling stories. We will break down the process of creating designs from the script to the stage, and study recordings and photographs of plays, musicals and their designs to help inspire students to come up with a process that works for them. By the end of the trimester, students will be asked to craft their own designs for a stage production, show a keen understanding of the needs of the text and characters, communicate their creative vision, and present basic sketches and presentations of their designs.

**Music Composition and Production**

Prerequisites: None

Students will build upon their general knowledge of music to write and produce their own music. They will expand upon their foundation of music theory to create new works of art using recording software and other technologies. Using Soundtrap, keyboards and other instruments, students will learn basic composition and production techniques, while placing an emphasis on collaborative creation and editing. Students will have the opportunity to showcase their compositions during class, assemblies, and at other community events. The course will culminate with an individual project of an original composition that has been written, then either produced and recorded, or arranged and performed live, at the preference of the student.

**Tri 3 B Days**

**Miniature Sculpture**

Prerequisites: None

In this elective students will explore the materials and techniques to create miniature environments. Think of very detailed dioramas, book nooks, or custom doll houses. We'll create both indoor and outdoor environments using polymer clay, laser cut wood, paint, fabric, and other specialty materials to create textures. Students will learn the planning process, such as sketching, and creating a base to work within, and then create the different pieces to complete each project. Finally, we'll learn how to photograph and film the work.

**Musical Theater Stage Production**

Prerequisites: Must be in school musical by audition or interview

> *I love the theater as much as music, and the whole idea of getting across to an audience and making them laugh, making them cry - just making them feel - is paramount to me.* - Stephen Sondheim

This course will focus on rehearsing and mounting all performance aspects of the spring musical. Students will explore the process of creating a fully fledged musical production from tablework through strike, mirroring a professional experience. In class, students will have the opportunity to analyze the script, build clear characters, make informed choices,
learn and review music, block and choreograph. By the end of the trimester, students will feel prepared to confidently perform in the spring musical.

**STEAM Explorations: Chemistry**
Prerequisites: none

In this course, students will ask, “What is the environmental impact of the community on the Barrie school campus grounds? How can we mitigate the impact of the community?” Students will propose and pursue a project that helps answer these questions using the tools of chemistry. The course will involve ample opportunities to get outside and to conduct original research that leads to a real-life impact on Barrie's campus.

**Social Movements and Changemakers**
Prerequisites: none

This course will focus on how social change happens, and the people and movements behind it. Students will learn about how movements have arisen to address pressing challenges. They will also explore a movement or topic of their own choosing, focusing on how the movement succeeded (or did not), and what lessons might be learned for addressing challenges in the present day.

**Yoga**
Prerequisites: none

Students will learn the basic poses of yoga, including the Sun Salutation Sequence. Yoga is practical and can be adapted to anybody, and it will help reduce stress. Techniques will be used that you can apply during the day before a test or a presentation. If you've tried yoga before or if you haven't you're welcome to join.

**Trimester-long US electives (offered in previous years)**

**STEM electives**

**Atmospheric Science**
Prerequisites: None

In this class, students will get hands-on experience with atmospheric science through a trimester long student-driven weather balloon project. Students will learn about the basics of atmospheric science including meteorology, atmospheric chemistry, and atmospheric physics. These studies will include both regional and global weather patterns and exploring the relationship between the two. We will also learn about different types of air quality
measures and air quality monitoring. In our final project, students will collect data from the weather balloon launch and learn to analyze the data to draw conclusions about our local atmospheric conditions.

**STEAM Explorations: Biology**  
Prerequisites: None

In this course, students will ask, “What is the environmental impact of the community on the Barrie school campus grounds? How can we mitigate the impact of the community?” Students will propose and pursue a project that helps answer these questions using the tools of biological sciences. The course will involve ample opportunities to get outside and to conduct original research that leads to a real-life impact on Barrie’s campus.

**STEAM Explorations: Chemistry**  
Prerequisites: none

In this course, students will ask, “What is the environmental impact of the community on the Barrie school campus grounds? How can we mitigate the impact of the community?” Students will propose and pursue a project that helps answer these questions using the tools of chemistry. The course will involve ample opportunities to get outside and to conduct original research that leads to a real-life impact on Barrie’s campus.

**Coding**  
Prerequisites: None

This course will provide opportunities for students with a variety of levels of exposure to coding and computer science. Beginner students will learn and apply core concepts of computer science, and will gain familiarity with HTML and CSS. Students with more thorough coding and computer science exposure will continue to hone their skills, while gaining skills in Python and exploring complex applications of coding and computer science, up to and including game design, cybersecurity, and other advanced topics.

**Advanced Topics in Chemistry**  
Prerequisites: Chemistry

This advanced chemistry course is designed to provide students with a college-level chemistry experience, including opportunities to conduct independent research, engage with primary research in the field, and apply chemistry knowledge to real-world problems. Previous iterations of the course have resulted in presentations at national and international chemistry conferences and engagement with university researchers. Advanced Topics in Chemistry is open to all students that have completed a year of chemistry who wish to take part in a rigorous and academically challenging course.
**Multivariable Calculus**
Prerequisites: AP Calculus and approval of the instructor

Students may participate in this year-long, college-level mathematics course only with the prior approval of the instructor. Students taking the course should sign up for it for each trimester on the elective registration form.

**Robotics**
Prerequisites: none

Have you ever wondered what makes robots move? Have you ever wondered what coding has to do with robotics? Wonder no more! Learn the fundamentals of coding and robotics. Build a robot of your own to solve a simple task, then use those skills to take over the world.

**Arts electives**

**Barrie Singers**
Prerequisites: None

In this trimester course, students will learn the basic techniques and skills of vocal music, including diaphragmatic breathing, pronunciation, projection, intonation, and reading music. Students will have opportunities to perform both in class, during assemblies, and at other community events. The course will culminate with an Arts Night performance.

**Fall Play Production**
Prerequisites: Audition / tech interview for the fall play

> I knew that what I wanted to do in the theater was to recreate moments I remembered as a boy preacher, to involve the people, even against their will, to shake them up, and hopefully to change them.” - James Baldwin

This course will focus on rehearsing and mounting all performance aspects of the fall play. Students will explore the process of creating a full length play, from tablework through strike, mirroring a professional experience. In class, students will have the opportunity to analyze the script, build clear characters, make informed choices, learn and review music, block and choreograph. Students will also help bring the technical aspects of the performance to life and strengthen their skills as designers. By the end of the trimester, students will feel prepared to confidently perform and run the fall play.

**Band**
Prerequisites: Audition
Barrie Upper School’s advanced music ensemble will rehearse diverse and challenging material from the genres of jazz, pop, and rock, and perform some of the most beloved songs from the past century for a variety of audiences on and off campus. Students who audition for this group must have at least some experience on their primary instrument. Auditions will be held at the start of each term and can be arranged in coordination with the instructor.

**Musical Theater Cabaret / Cabaret Band**

Prerequisites: None

*Performance art is about joy, about making something that’s so full of a kind of wild joy that you really can’t put into words.* - Laurie Anderson

This course will provide a unique opportunity for students to build theatrical skills in a supportive yet challenging environment while discovering their own artistic voices. This class will cater to students at all skill levels, focusing on different areas of expertise (acting, singing and dancing) each week. In conjunction with the cabaret band, students will then apply those skills for a performing arts showcase consisting of solo’s songs, scenes into songs and group dance numbers.

**Design I**

Prerequisites: None

*The designer does not begin with some preconceived idea. Rather, the idea is the result of careful study and observation and the design of a product of that idea.* - Paul Rand

In this course, students will explore the fundamental areas of theatrical production design (set, lights, sound, props, costumes, projection), and how production designers use their skills to help tell compelling stories. We will break down the process of creating designs from the script to the stage, and study recordings and photographs of plays, musicals and their designs to help inspire students to come up with a process that works for them. By the end of the trimester, students will be asked to craft their own designs for a stage production, show a keen understanding of the needs of the text and characters, communicate their creative vision, and present basic sketches and presentations of their designs.

**Musical Theater Stage Production**

Prerequisites: Must be in school musical

*I love the theater as much as music, and the whole idea of getting across to an audience and making them laugh, making them cry - just making them feel - is paramount to me.* - Stephen Sondheim

This course will focus on rehearsing and mounting all performance aspects of the spring musical. Students will explore the process of creating a fully fledged musical production from tablework through strike, mirroring a professional experience. In class, students will
have the opportunity to analyze the script, build clear characters, make informed choices, learn and review music, block and choreograph. By the end of the trimester, students will feel prepared to confidently perform in the spring musical.

Music Composition and Production
Prerequisites: None

Students will build upon their general knowledge of music to write and produce their own music. They will expand upon their foundation of music theory to create new works of art using recording software and other technologies. Using Soundtrap, keyboards and other instruments, students will learn basic composition and production techniques, while placing an emphasis on collaborative creation and editing. Students will have the opportunity to showcase their compositions during class, assemblies, and at other community events. The course will culminate with an individual project of an original composition that has been written, then either produced and recorded, or arranged and performed live, at the preference of the student.

Animals in Art
Prerequisites: None

This class uses animals as inspiration for artwork. Materials can be guided by the class, and there will be opportunity for drawing, painting, digital, and sculptural work. We will learn techniques for breaking down the anatomy of animal bodies and faces into basic shapes, and ways to show texture and pattern. Animals will be observed through photographs, and live observation on campus and in nature centers and aquariums. Students taking this class should be motivated to learn to draw realistically, as well as develop their own style.

Audition Technique
Prerequisites: None

All you have to remember is that 'audition' is synonymous with 'opportunity.' I mean, if you absolutely hate auditioning, do you also hate opportunities? That wouldn't make much sense. - Hilary Swank

This course aims to demystify the process of auditioning for a play or musical and help students find joy in auditioning. Finding material, resume building, taking headshots, wearing proper audition attire, and participating in dance calls are all learned skills that will be explored. Each week, students will prepare for and participate in mock auditions for different types of productions. By the end of the course, students will have acquired enough material to go out on auditions as more confident and prepared performers.

Tonal Theory
Prerequisites: Approval of the instructor
Students will expand their music theory skills to strengthen their performance, response and composition. Condensed from a year long independent study, students will cover topics such as Scales, Key Signatures, Circle of Fifths, Intervals, Triads and Inversions while strengthening sight-reading skills. As this is a trimester it is not designed for an AP course, but will prepare students for AP or Tonal Theory in college, which will be required for any music program.

**Portraiture**
Prerequisites: None

This is an observational drawing, painting, and sculpture elective that focuses on how to draw the human face. Students will learn anatomy, and basic proportion, as well as how to observe and show the subtle differences that make people individuals. We will work both from life and photographs, with realism as our goal. By the end of this class, students should feel confident to create portraits independently.

**Ceramics**
Prerequisites: None

In this class, students will learn vocabulary, processes, and essential techniques to make successful ceramic sculpture. The focus of the course will develop hand building techniques to create both functional and decorative artwork. Students will work with Pinch, coil, slab, and surface decoration techniques. Once a week, students will have the opportunity to work on the potter's wheel, learning to throw basic forms such as bowls and cylinders. Students will research pottery from different cultures to be used as inspiration for projects and presentations. Students may take this class more than once, and assignments will be modified to challenge more experienced students.

**Digital Painting**
Prerequisites: none

In this art class students will learn to draw, paint, and collage using digital tools such as photoshop and procreate. We will work on iPad as well as desktop computers with pressure sensitive Wacom tablets and styli. Subjects for assignments will be student driven but will use life references and imagination as inspiration. Examples of projects could be: paint an alien landscape or create a comic that shows the same character from at least three different views. Students may take this class more than once.

**Humanities electives**

**Creative Writing: Poetry**
Prerequisites: None
Poetry can change the way we see the world; it can break new ground for language; it can open hearts and minds with a softly spoken word or a transcendent turn of phrase. This is a course for writers – songwriters, poets, and anyone who wants to write more effectively. Throughout the trimester we’ll cover key poetic devices by studying poetry from a handful of modern poets, and we’ll try our own hands at writing new poems from a select number of prompts. Students will have the opportunity to workshop their own writing, getting feedback on their drafts and working towards more polished poetry. This course serves as either an introduction to writing poetry or the next level for students who have already taken this class.

**Afro-Feminism and Womanism**

Prerequisites: None

In this class, students will be introduced to feminism as it applies to women of African descent through film, music, art, and literature. The course will begin by defining and exploring the origins of Africana Womanism and womanism to dissect the practices throughout history and how that impacts current expressions that we see everyday. The course will explore works by a variety of African artists, Afro-Caribbean artists, Afro-Latina artists, Beyoncé, Cardi B., bell hooks, Audrey Lorde, Angela Davis, Sojourner Truth, Nina Simone, and many more to discuss the ways intersectionality of culture ties into Africana Womanism. The students will have a choice project at the end of the trimester that will use historical evidence and past examples of Africana Womanism and the concepts discussed to analyze a contemporary form of the Black feminist thought that aims to undo systems of exploitation, dismantles economic structures that justifies an undignified assault on the bodies of Black women, or creates practices to ensure equity for women who identify as Black.

**Welcome to Hell**

Prerequisites: None

*There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy...*

This elective will examine different representations of hell in eastern and western literary and religious texts. By studying closely the concept of hell, students will explore classical allusions and representations, compare different religious and literary conceptions, and examine individual and cultural value systems. Some of the authors and texts we will read and discuss include the Bhagavad Gita, Homer, Virgil, Ovid, Tibetan Book of the Dead, Augustine, the Quran, Dante, Chaucer, Milton, Baudelaire, and modern mixed media texts in conversation with the classics studied.

**From the Board to the Sword: The Problem of Colonialism in Board Games**

Prerequisites: None
“Winner takes all.” This is the general rule of thumb for most board games, like Risk, Settlers of Catan, and Monopoly. However, that same principle has guided colonial thinking since the so-called “Age of Exploration.” In this course, we will play several board games and unpack some of the colonial ideas present in them. We'll also consider the greater impacts of these games on our culture, mainly how they perpetuate a variety of -isms, e.g., racism, nationalism, capitalism, and exceptionalism, that overall can hurt community and collaboration. At the end of the course, we'll examine whether board games truly promote a “winner-take-all” mentality or whether this concept is a natural human phenomenon.

**Ethical Dilemmas**
Prerequisites: None

In philosophy, ethical dilemmas are situations in which an agent must consider two or more moral values but can only honor one of them. In this elective, we will explore current moral issues in light of various ethical theories. Theories will include such classics as Virtue Ethics, Deontology and Utilitarianism. Issues may include bioethics and medicine; inequality and discrimination; justice and punishment; information ethics; environmental ethics; or other areas. Through a series of debates, students will discuss practical issues in relation to ethical theories, and various ethical perspectives will be critically examined.

**Film Study: Bildungsroman**
Prerequisites: None

The goal of this class will be to examine how media (specifically movies and TV) represents adolescence and growing up through the “coming of age” movie genre. Throughout the class, students will watch films and a TV series that demonstrate how different characters spend their high school years. Students will be asked to analyze these films during class discussions and articulate if they believe the films are an accurate representation of the high school experience. The class aims to show students a diverse collection of films which includes varying stories about characters from different cultural, racial, and socioeconomic backgrounds all connected through their experience with being an American teenager.

**Bean There, Done That: The History and Mystery of Coffee**
Prerequisites: None

Why do people say, “Don't talk to me until I've had my coffee?” What is it about coffee that can affect people's moods—even behaviors? And why do some people look down on those who put cream and sugar in their cup of Joe (and why is it called Joe)? In this course, we will examine the world of coffee, from studying the difference between Arabica and Robusta beans, to debating the value of percolating coffee (pour-over and drip) vs. immersing coffee (French press). We'll also consider the impacts of coffee production from a variety of lenses: historical, cultural, economic, and environmental, to name a few. This class culminates in a final project that taps into each student's personal and academic interests in coffee, connecting themes of the course to a single project that delves into one of the branches of coffee's impact on the world.
National History Day
Prerequisites: 9th & 10th graders

In this course, students will participate in the National History Day process. This will constitute choosing a topic, relating that topic to a theme, completing an in-depth primary and secondary research, and finally choosing a project category to create: documentary, performance, exhibit, website, or paper. Following the completion of the course, students will submit their projects to a county-wide competition where they will get feedback on their work from a panel of judges. Students must be passionate about asking questions and doing the hard work of answering them.

Movement and Wellness electives

Yoga
Prerequisites: none

Students will learn the basic poses of yoga, including the Sun Salutation Sequence. Yoga is practical and can be adapted to anybody, and it will help reduce stress. Techniques will be used that you can apply during the day before a test or a presentation. If you've tried yoga before or if you haven't you're welcome to join.