



*Innovators. Thinkers. Leaders.*

# Curriculum Guide Academic Year 2024-2025

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*Saddle River Day School is accredited by the Middle States Association of Colleges and Schools, and is a member of the National Association of Independent Schools (NAIS) and the New Jersey Association of Independent Schools (NJ AIS). We also hold memberships with Cum Laude Society, French and Spanish National Honor Societies, National Association for College Admissions Counseling, and the Association of College Admissions Counselors in Independent Schools.*

*Saddle River Day School admits students of any race, color, creed, or national origin to all the rights, privileges, programs, and activities generally accorded or made available to students at the School. The School does not discriminate on the basis of race, color, creed, or national origin in the administration of its educational policies, admissions policies, financial aid or other programs administered by the School.*

# Saddle River Day School

## Mission Statement

*We inspire each child to achieve personal excellence and to become a caring and ethical contributor to society.*

### Core Values

#### *Everyone counts.*

At Saddle River Day School, all children and adults matter; their talents and contributions are prized.

#### *Love of learning.*

Saddle River Day School engenders a lifelong love of learning in our students with a caring and committed faculty, staff and administration.

#### *Intellectual risk taking.*

Intellectual risk taking is encouraged and celebrated through a nurturing, intimate environment that ensures the physical and emotional security of each child.

### Operating Principles

In order for us to fulfill our mission, we believe that it is necessary for us to:

- ❖ Recognize and develop the individual talents and gifts of each child
- ❖ Ensure a complete education, which involves a combination of core content, basic skills development, conceptual understanding of academic material, and the development of the integrity and skills to make individual, ethical decisions
- ❖ Articulate and maintain the highest academic, aesthetic, athletic and behavioral standards
- ❖ Maintain small classroom environments
- ❖ Teach and integrate technology into the daily curriculum in a relevant manner
- ❖ Encourage intellectual risk taking and a commitment to lifelong learning on the part of children and adults as they grow into a community of learners
- ❖ Prepare students to serve the needs of their school community and the community-at-large

## **Lower School Curriculum and Program Overview: Grades PreK-4**

### *Language Arts*

The Lower School language arts program is based on a balanced literacy approach which incorporates both phonics and whole language instruction. This is accomplished through the use of Reading Workshop, Writing Workshop and Word Study.

In Reading Workshop, children are taught reading and comprehension strategies, how to make connections with the text, how to check for understanding, how to predict and infer, and how to choose books that are at their independent reading levels. Students are given the opportunity to explore quality literature and practice reading strategies in small groups, whole groups, and individual settings. Students are assessed throughout the school year and guided reading instruction is differentiated to meet the needs of each child.

In Writing Workshop, writing is taught by exploring mentor texts and authors' writing styles. Teachers model how to choose meaningful writing topics and mini-lessons provide students with writing strategies they can incorporate in their writing. Mini-lessons focus on concepts such as capitalization, punctuation, grammar, expanding ideas, mechanics, revising, and editing. Students maintain a Writing Notebook to gather ideas and create writing pieces such as poems, narratives, and information books, which they take through the writing process. Children work in a whole group setting, small group setting, independently, and one on one with the teacher which allows for differentiated instruction.

In Phonics, Kindergarten uses a combination of two programs. For phonemic awareness, Kindergarten uses Heggerty. This program allows students to recognize and work with the sounds of language through language play activities. For systematic phonics instruction, Kindergarten is using Guided Phonics and Beyond. This program provides hands on explicit instruction following the Science of Reading scope and sequence. Kindergarteners work in both whole and small groups on differentiated lessons containing phonemic awareness, letter sounds, diagraph, blends, word building and decodable reading. Students also work on high frequency words (decodable and irregular), multisyllabic words and reading fluency.

In first through fourth grades, the Lower School uses the Zaner Bloser Spelling Connections program in which instruction is based on spelling principles and patterns, as well as phonics. Students work in differentiated groups, independently, and one-on-one with the teacher to dive deeper into spelling-meaning connection, vocabulary expansion, writing, and test practice. The program also highlights how to correctly use a dictionary and thesaurus.

### *Mathematics*

Students in Kindergarten through fourth grades use the Dimensions Math which focuses on moving from procedural math to conceptual problem solving and number sense. Interactive lessons and differentiated instructional resources, ensure that all students are successful. Students make connections through visualization, variation and questioning for a deeper understanding.

Students are engaged in exploration, are encouraged to explain their thinking while learning to solve problems multiple ways, and emphasis is placed on the process. and As children most often learn best by discovery, math instruction uses a variety of manipulatives allowing students to learn things for themselves. At age appropriate levels, children receive instruction in topics which include: basic arithmetic operations, measurement; data collection and analysis; probability, logic and problem solving. Through continuous review, the math curriculum is designed to meet the ever changing challenges of new times.

### *Science*

The Lower School science program is a unique aspect of this elementary curriculum. Using a curriculum developed by the National Academies and the Smithsonian Institute, our youngest learners are doing real science. In a lab dedicated to the needs and talents of children, the students learn and explore life, earth, and physical sciences. Elementary students build complete understandings of concepts while learning the basic skills of science. The curriculum design allows students to work independently as well as cooperatively to do investigations; ask questions; make and test predictions; record, reflect on and share their findings; and apply the skills and knowledge they have gained to new situations.

### *Social Studies*

The Lower School Social studies program aligns with the SRDS mission which, in part, states that we inspire each child to become a caring and ethical contributor to society.

Our Social Studies program provides students with a framework through which they can begin to understand themselves and others. They will learn about the history of the past, participate in the present and contemplate the future.

By studying and using map skills the students will build a knowledge of directional terms and a further understanding of spatial relationships. Learning about the globe will enhance their concept of the world. They will begin to realize the influence geography has on human behavior and habits. Students will acquire knowledge about diversity and various ethnic groups and recognize the relevance of contributions from different cultures.

The younger grades will learn about democracy and the value of good citizenship, partly through creating rules and understanding their impact and importance. Who makes the rules? How are they enforced? What happens when a rule is broken? Can a rule change once it is made? As their knowledge and experiences broaden they will expand their ever widening circles to encompass their local communities, the states, the nation and the continents. Upper elementary grades focus on geography by studying landforms, water, climate, and the ways people interact with the environment. The children explore the first Americans and how the environment, and location, impacted the lives of these early people. They will do an in depth study of the five regions of the United States and begin to discuss prominent events in American history that helped shape the country we are today. An emphasis is placed on reading and understanding facts through various sources of information. Research skills are taught as students learn how to apply and share their knowledge.

### *Project Based Learning*

The entrepreneurial mindset is explored and encouraged in the Lower School through grade level theme based Project Based Learning. Year-long Project Based Learning projects (PBLs) provide students with cross-curricular experiences in collaborative forums with both classroom and Special Area teachers. Students' individual talents are recognized and encouraged through a variety of creative and challenging activities that allow them to contribute to projects that support their individual interests and abilities. Real world application of skills taught within the classrooms are highlighted in culminating projects for each grade level. Whether it is creating a restaurant and designing a logo and menu with the Graphics Arts and Art teachers, or inventing bat house prototypes with the science teacher to save the bats for a sustainability PBL theme, each child is contributing something unique based on his/her skills, interests, and passions.

### *Spanish*

The primary goal of the World Language program in the Lower School is to establish a comfortable level of verbal and written usage of the Spanish language, which will provide a foundation for the continued study of languages in the Middle and Upper Schools. There is a firm focus on communication, cultural appreciation, and connection to various aspects of the school curriculum, such as reading and writing.

The program strives to instill a natural enjoyment for the use of the target language in order to express such things as greetings, family, clothing, animals, food, numbers, and classroom objects. Throughout their language acquisition, students will engage in simulations, games, and activities that will place them in real-life situations while reinforcing the subject matter. At each grade level the topics are expanded upon in terms of incremental vocabulary and idiomatic expressions.

### *IDEAS - Innovation, Design, Engineering, Arts, and Science*

The IDEAS Lab curriculum builds on a constructive ideology, as introduced by Jean Piaget and developed by Seymour Papert, to form an experiential approach to education. They both recognized that playing, tinkering, and experimentation are all essential to a child's cognitive development.

The primary goal of constructionism is to have learners create their own knowledge by creating and interacting with physical objects. It has clear connections to media literacy, as well as to self-directed learning. Innovative researchers and those who wish to see schools develop 21st century learners - with the skills to work in today's multidimensional career settings - know constructionism is a necessary tool. (Roffey, 2015)

In the IDEAS Lab, we often see students using a combination of the scientific method and their own creative process when working through a challenge. They have the opportunity to work out problems individually or in cooperative groups and have lots of practice with problem solving, critical thinking, sequencing, estimation, logic, and ethical reasoning. When they complete a project, they present their work, gather feedback from peers, have time to reflect on the process and think about what they might do differently. Sometimes they have the chance to reiterate, other times they may just write a reflection for next time. Our students are expanding vocabulary, gaining independence while developing a growth mindset that encourages them to believe they can learn to do anything.

The PreK-4 curriculum evolves every year but often involves coding, design thinking, 3D design/printing, augmented reality, virtual reality, artificial intelligence, robotics, problem solving, critical thinking, strategizing, sequencing, cooperation, creative thinking, digital media creation, ethics, digital citizenship, writing, science, math, art, and engineering.

### *Music*

The Lower School music program is designed to bring the joy of music to each student and to provide each child with the fundamental musical understanding and skills that will prepare them for more advanced study in the Middle School. PreK3 are taught to control their voices and bodies through song, dance, and percussion instruments. PreK4 and Kindergarten learn musical notes through handbells. First and Second Graders learn Orff instruments. Third Graders have a unit on learning to play recorders. Fourth Graders participate in a ukulele unit. The students are taught proper vocal technique, how to read musical notation, and how to use movement and percussion instruments to understand rhythm. In addition to Music Class, the students attend choir practice once a week, during which the students prepare pieces for concerts that take place in December and June.

### *Visual Arts*

The visual arts are a means to gain personal satisfaction through individual accomplishment in the creation of images and forms. The students are taught the basic elements and principles of art throughout their years in the Lower School Art program. Their projects involve the child in imagining, exploring, reasoning, inventing, and selecting; so that the experience will not only be rich in itself, but lead to personal creative growth, assimilation of information, and development of art skills. Students will enjoy creating both two and three-dimensional art pieces using a variety of techniques and materials. The students learn about a number of artists, styles and cultures throughout their art experiences. In addition to traditional studio art, fourth grade students begin the study of Graphic Design in classes where they learn what defines a graphic composition aimed at conveying a clear message in a powerful way. All students exhibit their artwork in the SRDS art show at the end of the year.

### *Physical Education*

The goal of physical education is to teach students how to control and use their bodies to perform skills at the mastery level. In the earlier stages of lower school, we aim to enhance a child's throwing and catching ability, balance, and their spatial awareness. As students grow and mature through the lower school years, the program seeks to improve sport-specific skills, coordination, agility, and sport knowledge.

### *Activities and Service Organizations*

Lower School clubs meet through the Coaching Academy and are conducted by SRDS faculty and staff as well as outside experts and professionals. Activities depend on interest and availability and are offered by the athletic season (Fall, Winter and Spring). The Lower School works with various service organizations each year based on local, national, and international needs as well as grade level skills, objectives, and interests. Organizations that the Lower School has worked with include The Seeing Eye Institute, Alex's Lemonade Stand Foundation, Unicef for Ukraine, American Red Cross California Wildfires, etc.

## Middle School Curriculum and Program Overview: Grades 5-8

At Saddle River Day, we are responsive to the needs and learning styles of all of our students. We believe that disciplines and departments are porous. We encourage students to learn, access, and use skills that will benefit them across the curriculum. The content of the curriculum is the vehicle through which we communicate these skills, but at the heart of the Middle School education at SRDS is the belief that we aid in the child’s journey from student to scholar, and from adolescent to adult.

To aid in their multifaceted development, every middle school student is part of an Advisory group which meets regularly and discusses academic as well as social and emotional topics. Advisory provides students with a time to fit in, to recognize that they do not travel this journey through adolescence on their own, to connect with the adults in the building on a different level, and an opportunity to interact with students not only in their own division, but also across the lower and upper schools. The goal of Advisory is to provide young teens with many opportunities to interact with peers and adults as they adjust to becoming young adults.

### *Learning Across Disciplines:*

Students identify and explore connections among disciplines. Skills in the Humanities readily complement one another. Similarly, Math and Science courses in the Middle School adopt a student-centered, inquiry based approach to learning that integrates Science, Technology, Engineering, Art, and Mathematics. Skills and content developed in these courses build students’ capacity for real-world scientific exploration and design. Middle School classes in the traditional core areas and world language are required each year. In addition to academic classes, students participate in physical education and the arts – with electives of graphic art, studio art, music, theater and band. In 8th grade, students take a semester of creative writing and one in Public Speaking and are also offered electives in Business and Entrepreneurship and Computer Science. Students have nightly homework in most subjects and are expected to do their best on each assignment. Extra help and support is available and advisors help to steer students toward that support when it is needed.

*Table 1. Middle School Program by Grade Level*

|   |  |
|---|--|
| <p><b><u>Grade 5</u></b><br/>           English 5<br/>           History 5<br/>           Math 5<br/>           Science 5<br/>           Spanish 5<br/>           Arts (fine, music, graphic)<br/>           Digital Citizenship 5<br/>           IDEAS Lab<br/>           Capstone Project<br/>           Physical Education and Health<br/>           Study Skills</p>  | <p><b><u>Grade 6</u></b><br/>           English 6<br/>           History 6<br/>           PreAlgebra 6<br/>           Science 6<br/>           Spanish 6<br/>           Arts (fine, music, graphic)<br/>           Capstone Project<br/>           Digital Literacy 6<br/>           Physical Education and Health<br/>           Study Skills</p>   |
| <p><b><u>Grade 7</u></b><br/>           English 7<br/>           History 7<br/>           Algebra I or Algebra I Honors<br/>           Science 7, Science 8, or Biology Honors<br/>           Spanish 7, French I, or Arabic I<br/>           Capstone Project<br/>           Arts (fine, music, graphic)<br/>           Physical Education and Health<br/>           Digital Fluency 7<br/>           Study Skills<br/>           Electives: 7th grade Business or an extra Arts class</p> | <p><b><u>Grade 8</u></b><br/>           English 8<br/>           History 8<br/>           Geometry or Geometry Honors<br/>           Science 8 or Biology Honors<br/>           Spanish 8, French I, French II, Arabic I or Arabic II<br/>           Capstone Project<br/>           Arts (fine, music, graphic)<br/>           Physical Education and Health<br/>           Public Speaking and Creative Writing<br/>           Optional electives: Computer Science I, Computer Science Principles, or Business &amp; Entrepreneurship I</p> |



### *Advisory Program*

Students are assigned to faculty Advisors. The Advisors act as an advocate and a liaison between home and school for academic and non-academic issues. Advisory groups meet at various times throughout the week. Advisors assist students with age-appropriate concerns such as study skills, interpersonal relationships and time management.

### *Bring Your Own Device (BYOD)*

Every student in grades 5-8 is expected to bring a personal computing device for use throughout the school day. By utilizing technology as a tool to aid in their education and development, students engage in learning that is both authentic and extends beyond the walls of the classroom.

### *Interscholastic Athletics*

Middle School students may participate in interscholastic athletics. The emphasis in the Middle School is placed on participation and team building rather than competition. Teams participate in interscholastic sports in the following areas:

Fall – soccer (co-ed), tennis (girls), track and hockey (offered as a clinic)

Winter – basketball (girls and boys), bowling

Spring – tennis (boys), lacrosse, golf, track, and volleyball (offered as clinics)

### *Other Opportunities*

Film Appreciation

Closing Bell - Stocks

Community Service

MS Clubs

US Fall Drama and Spring Musical (8th grade)

Fall MS production and Spring Middle School Musical (Grades 5-8)

Math Olympiads

Robotics

Leadership roles

Odyssey of the Mind

FBLA

Debate Team

## Upper School Curriculum and Program Overview: Grades 9-12

The Upper School program is designed to provide students with a 21st century education, including real-life skills and preparation for college. To graduate, students must complete four years of English, three of mathematics, three of laboratory science, three of social science, three of world language, and one year of visual or performing arts which is generally met by taking two classes in the arts. In accordance with US Department of Education and New Jersey State law, all students must take four years of physical education and two quarters of Health class. All students are required to take a minimum of five academic classes per year, but we recommend more. Specific graduation requirements are listed in Table 2 and are detailed in the Student Handbook.

College preparatory level courses are rigorous and designed to advance student skills and knowledge. Skills such as organized writing, research and inquiry are honed as students explore comprehensive discipline based content. These classes are offered in all departments.

An honors level curriculum is available in most departments. These courses are in-depth and require that students invest substantial time outside of class to cover curricular topics. As such, teacher recommendation is required to enroll in these classes.

Advanced Placement (AP) classes are offered in each department according to demand. AP classes require the ability to read and understand college level material, extensive writing, a high level of problem solving, as well as an investment of time outside of class and therefore require teacher recommendation to enroll. AP classes begin two weeks before the start of each school year and students enrolled in AP courses are required to take the AP exam in May.

In all upper school classes, students are expected to be active participants in their own education. Classes are interactive, inquiry based environments where there is no ‘back row’ in which to remain disengaged. Teachers are experienced educators who utilize instructional technologies and methodologies designed to engage students’ minds with the content while fostering the development of the skills needed for success at the current and future level. The goal is to prepare our young adults for college level study and to provide them with the opportunities to contribute to the rich and diverse academic, athletic, and artistic communities that exist at SRDS.

*Table 2. Graduation requirements by department. A full year course earns 3 credits per year.*

| <b>Department</b>  | <b>Credit</b> | <b>Courses at college prep, honors or AP level</b>          |
|--------------------|---------------|---|
| English            | 12            | One English course per year                                 |
| History            | 9             | Big History, Modern World History, US History               |
| Mathematics        | 9             | Algebra I, Geometry, Algebra II                             |
| Science            | 9             | Biology, Chemistry, One other lab science                   |
| World Language     | 9             | Through level III in one language                           |
| Art                | 3             | Performing and/or Visual Arts                               |
| Physical Education | 4 years       | Plus 1 trimester of Health in 9th grade and 1 in 10th grade |

Table 3. Upper School courses (at college prep, honors or AP level) generally taken by grade. Enrollment in 5 major, yearlong courses is required each year.

|  |  |
|--|--|
| <p><b>Grade 9</b><br/>           Research &amp; Writing<br/>           Freshman Seminars in English<br/>           Freshman Seminar in History or AP Human Geography<br/>           Algebra I, Geometry, or Algebra II<br/>           Biology<br/>           World Language<br/>           Art or other elective<br/>           Physical Education and Health</p>        | <p><b>Grade 10</b><br/>           English 10<br/>           World History or AP World/AP Euro<br/>           Geometry, Algebra II, or PreCalculus<br/>           Chemistry<br/>           World Language<br/>           Art or other elective<br/>           Physical Education and Health<br/>           Sophomore Seminar</p>  |
| <p><b>Grade 11</b><br/>           English 11 or AP English Literature<br/>           US History or AP US History<br/>           Algebra II, PreCalculus, Calculus, or AP Calculus<br/>           Physics or other lab science<br/>           World Language<br/>           Art or other elective<br/>           Physical Education<br/>           College Counseling</p> | <p><b>Grade 12</b><br/>           English 12 or AP English Language<br/>           PreCalculus, Calculus or Math Elective<br/>           Social science elective or AP Social Science<br/>           AP Science or science elective<br/>           World Language<br/>           Art or other elective<br/>           Physical Education<br/>           College Counseling</p> |

**Other US Co-Curricular Programming**

**Advisory program** The Advisory Program establishes and maintains a closer working relationship between students and faculty members. Students are placed with advisors by grade level and remain with their advisor and groups for the duration of their years at SRDS. The faculty member provides academic guidance as well as social and community awareness, in the hopes of preparing students to become well rounded and focused on their academic and social development.

**BYOD** All of our US students participate in a technology initiative, “BYOD” (Bring Your Own Device), utilizing devices to enhance the learning experience, to collaborate, and to connect with places beyond SRDS. All of our students gain important digital skills preparation through our research curriculum, project work in our IDEAS Lab, and various Google Applications that are fundamentally a part of our class instruction and academic work.

**Arts** Students have various options to participate in the Arts. All students complete an Arts requirement; the curriculum guide describes the curricular opportunities in the Arts Department. Additionally, students may audition for acting, singing or tech crew roles in our Fall Drama production and Winter Musical.

**Athletics** Full interscholastic program open to students in grades 9 – 12

|               | <b>Women's</b>                                  | <b>Men's</b>               |
|---------------|---|----------------------------|
| <b>Fall</b>   | Soccer<br>Cross Country<br>Volleyball<br>Tennis | Soccer<br>Cross Country    |
| <b>Winter</b> | Basketball<br>Winter Track                      | Basketball<br>Winter Track |
| <b>Spring</b> | Lacrosse<br>Track                               | Tennis<br>Track            |

*Activities and Service Organizations*

|                                       |   |
|---------------------------------------|---|
| Admissions Ambassadors                |   |
| Être Girls                            | Blood Drive                               |
| Retrospect Yearbook                   | Community Service                         |
| Drama and Musical Theater Productions | Film club                                 |
| French Exchange                       | TEDEx club                                |
| Mimesis Literary Arts Publication     | Model U.N.                                |
| Rebels 404 tech club                  | FBLA (Future Business Leaders of America) |
| <i>Rebel Report</i> Student Newspaper | Rebelvision (broadcast news show)         |
| Rebel Muffins (broadcast talk show)   | Vid Kids                                  |
| Spanish Club                          | Unplugged Cafe (open-mic night)           |
| Spanish Language Trip                 | Student Council                           |

## **Course Descriptions grades 5-12**

*Unless otherwise noted, students may take any courses for which they meet the prerequisite which is generally the prior course. For honors and AP classes, students must have demonstrated strong performance in prior classes, have the recommendation of their current teacher, and the approval of the department chair. For AP English classes there is also a placement exam required.*

### **Department: English**

In English courses throughout the Middle and Upper School, certain goals remain constant as students develop and progress. All English courses help students to read intelligently, write well, speak effectively, and listen attentively. Students are taught to analyze, criticize, judge—with eye, ear, mind, voice, and pen to express these skills in an appropriate fashion. Since students make use of their analytical, critical, evaluative, and judging capacities in all disciplines, the English Department coordinates with other Departments to provide students with many opportunities for practical application of their knowledge and skills throughout their courses.

Activities that train students to analyze, criticize, evaluate, and judge are the mainstays of the language arts: reading, writing, speaking and listening. In our English courses, students develop a sense of the chronology of literature and of one's heritage, which includes elements of Greek, Roman, and Judeo-Christian civilizations, as well as the diverse cultures that constitute aspects of both our diverse student population and our American experience. Through the use of essential questions, the English Department seeks to provoke deep thought, lively discussion, sustained inquiry, and new understandings within its students, as well as spark meaningful connections with prior learning and personal experiences. At the heart of all the English Department's activities is the conviction that reading, writing, speaking, and listening demand a high degree of intellectual sophistication, emotional conviction, and personal discipline, which we address in developmentally appropriate ways as the students progress throughout their years at SRDS.

In the English program each course builds on the skills and experiences students acquire in previous grades. Throughout the Middle and Upper School English courses, students learn vocabulary and grammar; explore the reading and writing of major literary genres including poetry, short story, drama, essay, memoir, graphic novels and traditional novels; and hone their oral presentation skills with presentations to their classmates and larger audiences. Every Saddle River Day School student takes at least one English course every year. A robust selection of electives are also offered in the upper grades. Advanced Placement Literature and Language are offered in Grades 11 and 12 for students of demonstrated ability and superior motivation.

### **English Grade 5**

In fifth grade English, students build and strengthen their reading skills with a combination of class novels and independent reading books. Students will practice close reading, noting how authors develop themes in fictional works, higher level nonfiction, and explore the genre of fantasy. Writer's workshop allows students to practice and hone their writing skills in various genres. They will begin the year with a reflective personal narrative, then they will move on to research reports, and also explore the concept of memoir writing. Students investigate and utilize proper mechanics and style, while developing their ability to think, speak, and write critically. Additionally vocabulary, spelling, and grammar are incorporated throughout the year.

### **English Grade 6: Human Rights in Literature**

The aim of the English 6 course is to give students a firm foundation in the close reading of and written response to literature and nonfiction, with an emphasis on developing active reading strategies. Through the reading of diverse texts, students will gain an understanding of worldwide social issues. They will consider essential questions such as: What is acceptance? What are human rights and why are they important? What is my role in the world today? How can I help others? Much of the writing done for class is driven by the

compelling literature read together, as well as independent reading, and the various ideas and issues these works prompt. Writer's Workshop will introduce students to narrative writing, the literary essay, and informational writing. Using the writing process and learning revision strategies will be a key part of Writer's Workshop. Parts of speech and grammar rules will be emphasized, as well as the usage of new vocabulary, including root words, prefixes, and suffixes.

### **English Grade 7: Identity in a Changing World**

English 7 is designed to encourage students to grow from literal to figurative thinkers capable of reading, writing, listening and speaking critically. Students will read and respond to multi-layered texts in a variety of genres and media. The essential themes examined include identity, culture and community, social justice, and dealing with conflict and change. In Writer's Workshop, students will carefully consider purpose and audience as they write fiction, literary essays, and persuasive pieces. Integral to our reading and writing, developmentally appropriate grammar and vocabulary are also taught and reinforced.

### **English Grade 8: Who am I? Answers to the Question in Literature**

Eighth grade English is a reading and writing intensive class. In-class writing and journal writing are exercised to make a smooth transition into the five-paragraph essay. Students develop writing skills such as the creation of strong theses, developed paragraphs with specific supports and logical conclusions. Expository and creative writing grow out of the literature discussions and analysis. Through creative writing prompts, students are encouraged to experiment with developing their own literary voice. As we move through the writing process, students begin to identify their own personal strengths and improve on their weaknesses. Grammar, vocabulary, and spelling are enhanced by challenging students to look closely at the assigned reading. Participation is essential to exploring and challenging oneself on a regular basis. Cooperative group work, discussion, in-class writing, peer editing, and presenting are all used to develop critical reading and writing skills.

### **English 9/English 9 Honors -- World Literature for Ninth Graders**

English Seminar exposes ninth graders to a variety of texts and voices from around the world. The course engages students in universal themes and literary tropes such as the conflict between good and evil, the journey of the hero, coming of age in crisis, and the difference between fate and free will. At the same time, the reading selections revolve around the formation of foundation questions that will guide the course of study throughout the year. These questions complement the other coursework of a freshman including biology, world history, art, and language, thus allowing a humanities approach. Students study novels, plays, short stories, poetry, works of nonfiction, and artwork as they develop their critical thinking, reading and writing skills. Students study vocabulary in context in addition to supplemental workshops on grammar and design. The class is centered on writing and discussion in both high and low stakes situations. Students will write in a journal and learn the writing process at the upper school level. Typically, students will write one major writing piece per trimester, including a research essay in MLA format.

### **English 10/English 10 Honors – Creating the World**

These English courses focus on a humanities approach to analyzing literature and honing literacy skills. Through the thoughtful consideration of essential questions, students explore common themes in literature and the social sciences such as industrialism, colonialism, revolution, modernity, and globalism to develop a more meaningful understanding of what they read and how literature connects to other disciplines. A wide variety of texts, genres, discussion techniques, research and writing skills help the students to construct personal and authentic reading experiences, and to communicate their ideas in clear, thoughtful and creative ways. At the CP and Honors levels, students are challenged and supported according to their needs and abilities, and are consistently encouraged to question, connect, analyze, synthesize and express their understanding of literature. In addition, at the Honors level, students will explore the themes in greater depth using additional materials to support more independent critical thinking.

## **English 11/English 11 Honors**

Students enrolled in English 11CP/11H discover wonderful opportunities to refine their compositional performances. Class members focus on important elements of writing, particularly grammar, essay structure, and paragraph development; participate in writing workshops and produce formal papers. Students will choose two semester courses that will allow them to strengthen critical reading and thinking skills by discussing classic and modern texts related to the genre study of each course. Potential offerings include **Mystery and Murder**, **Fantasy**, **Crossing Borders**, **Whose Voice Is It Anyway?**, **American Reflections**, and **Love in the West**.

### **Mystery and Murder**

This is a survey course studying the conventions of mystery and suspense, from the genre's inception in the early 19th century to its current manifestations in modern literature and film. Authors will include Poe, Conan Doyle, and Christie, and possible longer texts include *The Maltese Falcon*, *And Then There Were None*, and *Girl on the Train*.

### **Fantasy Literature**

Fantasy Literature is not bound by physical or psychological laws, though the sub-genre often deals with the actual human condition in an imaginary manner. These speculative novels separate themselves from science fiction and horror "by the absence of scientific or macabre themes." Writers create alternative, often symbolic, universes that encourage readers to explore archetypal figures and themes. This course will focus on *A Midsummer's Night Dream* (Shakespeare); *Alice's Adventures in Wonderland* (Carroll); *Little, Big* (Crowley); and *The Fifth Season* (Jemisin).

**“Crossing Borders - An Exploration of World Literature.”** Have you visited a country and wondered about its culture and its literary voice? This elective will focus on the literature from several continents. The students will be grounded in geographic areas where the pieces are set and will also study the literary traditions and voices pertinent to those cultures. To assist students in finding their own voices, weekly extended journals will foster formal literary discussions. Additional writing will include memoirs, formal essays, foreign film reviews, and poetry.

### **Whose Voice is it, Anyway?**

Every novelist, poet and short story writer has to choose from whose viewpoint(s) a piece will be depicted. This part of elective will examine literature from across the genres examining how important outlook is. Students will also have the opportunity to experiment and write their own pieces. They will also evaluate films, in order to explore how the point of view of movies is created.

**“Our Hopes and Dreams - American Reflections”** Is there a distinctly American voice? We are a young country with a dramatic history. Do our native writers reflect the hopes and challenges that have made our country unique? In the elective, we will explore the work of modern American writers who have commented on the American condition and also our past. They have written of their views in creative and fascinating fashions. We will explore the work of American writers who have commented on the American condition, past and present. A central issue we will explore is the conflict

both within the individual and between the individual and the group as he strives either to be accepted or to reject the expectations and values of the larger society.

### **Love in the West**

In this course, students will study the different ways in which authors ancient & modern treat the theme of romantic love. Through close readings of some of the greatest writers in the Western tradition, we will cultivate a deeper understanding of the intellectual history that has shaped our emotional lives.

## **English 12/English 12 Honors**

English 12 CP/Honors is a course which assumes students have solid reading and expository writing skills; therefore, the level of texts read, deconstructed, and analyzed are challenging and, in some cases, lengthy. The writing for the course encompasses both expository and creative genres. Students will choose two semester courses that will allow them to hone their writing, reading and presentation skills so that they are prepared to communicate their thoughts and views of literature and the world around them. The primary texts align with the study of the course genre, focusing around a variety of themes. The methods of instruction include seminar discussion, lectures, one on one writing tutorials, revision, group exploration and presentation. Potential offerings include **Sports Literature, Humor in Literature, The Bronte Sisters, Madness and Mayhem, The Art of the Short Story, Iliad, and Post Colonial Literature.**

### **Sports Literature**

An examination of sports and American society through literature will bring students to understand the connection between trends in sports and cultural philosophies.

Nonfiction texts include *Friday Night Lights* and *What Made Maddy Run*; fiction texts will include *The Natural* and *Rabbit, Run*. Supplemental articles from Sports Illustrated and The Athletic, plus documentaries from the ESPN series 30 for 30 will allow students to understand the influence and continuing narratives of sports in modern society.

### **“You Think that is Funny? Humor -what it is and how it is expressed in literature”**

In the course, I will also spend time focused on laughter – a natural human reaction to awkward, exaggerated or at times, violent situations. We seem to study many tragic pieces in English, but there is a rich trove of literature that explores the comic side of life. This course will explore the rich and varied tradition of humor. We will define different types: Satire, Irony, Stereotype, Hyperbole, Understatement, Black Humor, Farce, Comedy of Manners and explore representative texts.

### **Bronte Sisters**

The three Bronte sisters wrote some of the most interesting and important novels in the history of English fiction, opening many literary and commercial doors for women. Far from homogenous, these works explore domestic, gothic, and social avenues. The authors were born and raised in Yorkshire, and their texts certainly reflect this relatively isolated environment and illustrate how writers can utilize as well as transcend the places of their upbringings and class. Part of the enjoyment of spending time with this family of geniuses is comparing and contrasting their styles. The elective will consider *Agnes Grey* (Anne), *Shirley* (Charlotte), *Wuthering Heights* (Emily), and *Villette* (Charlotte).



### **Madness and Mayhem**

Students will explore the thin line between sanity and madness in a survey course that challenges them to decide if they can trust their narrators and protagonists. Possible texts include “The Yellow Wallpaper,” *Catcher in the Rye*, *Girl, Interrupted*, *Misery*, and *Black Swan Green*. The course will be supplemented with articles and texts diving into psychological profiles and afflictions, enabling students to gain a more nuanced and less judgmental view of these characters.  
find.

### **The Art of the Short Story**

In this course, students will study exceptional short stories from all over the world. We will read 19th century classics, 21st century experiments, and everything in between. Students will hone their styles by experimenting with a variety of literary techniques drawn from course texts. Frequent writing workshops will train students to give and receive constructive feedback. By the end of the semester, we will produce an anthology of short stories.

### **The Iliad**

The *Iliad* is a work of staggering complexity and beauty. Although it was written sometime in the 700-600s BC, Homer’s epic poem addresses questions of eternal significance: Why do we fight wars? What’s the relationship between human beings and the divine? What constitutes true courage, virtue, and love? In this semester-long course, we will study this magnificent work of art with the care it deserves. Along the way, we’ll discuss Ancient Greek history and mythology, and the origins of literature in the Western world.

### **Post Colonial Literature**

Studying Post-Colonial literature is fascinating, as it helps readers grasp the pervasive and deleterious effects of Imperialism on the cultures of various countries and on the contemporary world's view of such regions as the Indian subcontinent, Africa, and the Caribbean. This elective will focus on four novelists' presentations of the exploitation of these places by European powers. We will discuss *Mansfield Park* (Jane Austen), *The Moonstone* (Wilkie Collins), *The Conservationist* (Nadine Gordimer), as well as *Half of a Yellow Sun* (Chimamanda Ngozi Adichie); to aid our understanding of these works, we also will watch movie adaptations of them.

## **Advanced Placement English Literature Grade 11**

Advanced Placement English Literature delves deeply into the techniques and themes of iconic, challenging pieces of literature: novels, plays and poetry. The two-fold purpose of the course is to prepare students for the English Literature examination administered by the Educational Testing Service in May of each year and to hone sophisticated reading and writing skills. Writing and critical thinking of a high order are expected. The methods of instruction include seminar discussion, lectures, one on one writing tutorials, revision, and practice of the AP exam formatted essays.

**Prerequisites:** Teacher recommendation and an exemplary performance in English II Honors.

## **Advanced Placement English Language & Composition Grade 12**

This rigorous course focuses on the rhetorical analysis of non-fiction, fiction, film, and current events. Students will learn to identify an author's purpose and the use of rhetorical strategies in texts ranging from classical writings to contemporary works. Students are introduced to analytical tools designed to develop levels of questioning at the factual, inferential, and analytical tiers of knowledge, which ultimately provides them with mastery in the highest forms of analysis, synthesis, and argument. Through their reading, students will then learn how to craft their own style and voice in their composition writing of various lengths and complexities as well as peer edit and review. Students will be able to write effective prose at a first-year college level as well as take the AP Language exam.

**Prerequisites:** Successful performance in AP English Literature or Honors English 11 with strong teacher recommendation.

### ***Department: Mathematics***

The overarching goal of the Mathematics Department is to hone students' problem-solving abilities and develop their mathematical fluency. All mathematics courses help students build their arithmetic prowess, abstract thinking, and number sense. Students engage frequently with real-world problems and build connections to various phenomena throughout our mathematics curriculum. Technology is integrated into all mathematics courses to model real-world situations and solve mathematical problems.

The Middle School math program has three main components. The arithmetic component is designed to build basic skills and expand their applications. The two other components incorporate basic skills in algebra and geometry. Math 5 utilizes the Dimensions Mathematics program to help the students enhance their problem-solving skills. In Grade 6, students typically take Pre-Algebra, followed by Algebra I or Algebra I Honors in 7th grade. In Grade 8, students will typically take Geometry or Geometry Honors. This opens up a range of future possibilities for students as they enter upper school.

Starting in Middle School, all students are taught to use the graphing calculator. They are required to purchase an appropriate graphing calculator to use in the classroom and at home.

All students are required to complete the following three courses of mathematics for graduation: Algebra I, Geometry, and Algebra II, and it is highly recommended that students continue their study of mathematics beyond Algebra II. Enrollment in a mathematics course during all four years of high school is strongly encouraged.

### **Math 5**

Building upon concepts and skills taught in Lower School, Math 5 paves the way from elementary math to a more concrete study of sophisticated math. Students will gain an in-depth understanding, fluency with skills, and confidence in problem solving. They will have the opportunity to explore concepts through daily classwork and challenging examples, and then hone their understanding of the concepts more deeply through math games and projects. Topics of study include: whole numbers, geometry, algebra, decimals, fractions, proportional relationships, integers, and measurement. Critical thinking skills will continually be enhanced throughout the year, and the students will complete many application-based problems that are specific to topics being learned.

### **Pre-Algebra, Grade 6**

This course builds upon arithmetic concepts and skills and is designed to ease the transition from arithmetic to algebra. The properties of integers are studied first and then expanded to include rational numbers and real numbers. Students explore the concepts of solving multi-step equations and inequalities, performing operations with fractions, and simplifying expressions using exponent properties. They study rational numbers, ratios, proportions, probability, and percent, as well as graphing in the coordinate plane. Additional topics that are included in the course are squares and square roots, the Pythagorean Theorem and its applications, probability and statistics, and properties of triangles and quadrilaterals. Problem solving strategies, communicating mathematically, and utilizing mental math are stressed throughout the year. Students master these topics through a variety of ways while developing note-taking skills, their ability to express in words their processes and conceptual understanding, a variety of projects and labs, and more formal assessments like tests and quizzes. The Pre-Algebra course challenges students to enhance their critical thinking skills in order to promote further analytical and mathematical thought. Graphing calculators and computer technology are used extensively to enhance the mastery of concepts in the curriculum.

### **Algebra I/Algebra I Honors Grades 7, 8, or 9**

Algebra I integrates algebraic skill development with the broader framework of developing concepts. Functions and relations (including linear, quadratic, polynomial, and exponential) are used as a main theme in this study of algebra. Application-based problems are introduced throughout the curriculum. Graphing calculators and computer technology are integrated into topics to assist in understanding and visualizing statistics and data, linear equations, and other algebraic functions. An introduction to radicals is the concluding topic of Algebra I.

Algebra I Honors includes the entire Algebra I curriculum at a more enhanced cognitive level. Additional topics include a more comprehensive study of radicals, as well as a study of rational expressions and a more in-depth look at functions and their graphs. Students are expected to maintain and utilize a high level of critical thinking skills.

**Prerequisite:** Pre-Algebra, and recommendation by the department for honors level

### **Algebra IA, Grade 7**

Algebra IA is the first half of a two-year Algebra I course. Students in this course will complete the first half of the Algebra I curriculum.

**Prerequisite:** Completion of Pre-Algebra

### **Algebra IB Grade 8**

Algebra IB is the second half of a two-year Algebra I course. Students in this course will complete the second half of the Algebra I curriculum.

**Prerequisite:** Completion of Algebra 1A

### **Geometry/Geometry Honors Grades 8, 9, or 10**

Geometry offers the student a comprehensive study of two-dimensional Euclidean geometry. The language of geometry, polygons, and circles are studied in depth. The understanding of proof is an objective of the course. Additional topics of study are: area of plane figures, constructions (where applicable), transformations, and right triangle trigonometry. Algebraic and geometric concepts are reviewed in tandem to reinforce their mathematical connections. Applications are studied throughout the curriculum. Graphing calculators are used where appropriate.

Geometry Honors includes the entire Geometry curriculum, with a much more extensive study of proof. Students are expected to maintain and utilize a high level of critical thinking skills.

**Prerequisite:** Algebra I, plus departmental recommendation for honors level.

**Algebra II/Algebra II Honors Grades 8, 9, 10, or 11**

Algebra II reviews, sustains, and extends the knowledge of the real number system introduced in Algebra I. Polynomials, factoring, and graphing are discussed and explored in depth. Mathematical models are utilized in the discussion of coordinate geometry, problem solving, and in the detailed study of linear and quadratic functions. Also included is the study of irrational and complex numbers, fractional exponents, systems of equations, matrices, logarithms, and rational equations. Graphing calculators and computer technology are integrated into the course to assist in the understanding of solutions of equations and functions.

Algebra II Honors includes the entire Algebra II curriculum, as well as units on trigonometric functions and conic sections. Students are expected to maintain and utilize a high level of critical thinking skills.

**Prerequisites:** Algebra I and Geometry, plus departmental recommendation for honors level

*Math Electives***Precalculus/Precalculus Honors Grades 9, 10, 11 or 12**

Precalculus offers the student a comprehensive study of algebraic and transcendental functions. The course is constructed to aid students in developing their proficiency in algebraic techniques and in strengthening their understanding of the underlying concepts. Real-life problems, many using real data, are integrated throughout the curriculum. As appropriate, the graphing calculator is utilized to augment student understanding of the mathematical concepts.

**Prerequisites:** Successful completion of Algebra I, Geometry, and Algebra II, with teacher recommendation and permission of the Department Chairperson for the honors level.

**Advanced Placement Precalculus Grades 9, 10, 11, or 12**

The course includes two essential components: Mathematical Practices and Course Content. Students should develop and apply the described skills on a regular basis over the span of the course. Each of the three mathematical practices for AP PreCalculus have associated skills: Procedural and Symbolic Fluency, Multiple Representations, and Communication and Reasoning. Course Content: Polynomial and Rational Functions, Exponential and Logarithmic Functions, and Trigonometric and Polar Functions.

**Prerequisites:** Successful completion of the Algebra I, Geometry, Algebra II sequence, and permission of the department.

**Financial Algebra (College Prep) Grades 11 or 12** *(offered alternate years depending on enrollment)*

Financial Algebra is an elective math course for any junior or senior who has already completed the required math sequence. It covers some extremely important real-life topics, including financing a car, applying for a mortgage, balancing a checkbook, or paying off credit card debt. The students apply prior algebraic knowledge to real-life skills, such as managing a monthly budget. Numerous practical algebraic functions are explored throughout the course, equipping students with various problem-solving skills needed to make smart economic decisions in life.

**Prerequisites:** completion of Algebra I, Geometry, and Algebra II.

**Statistics/Statistics Honors, Grades 11 or 12** *(offered alternate years depending on enrollment)*

The primary aims of this elective course are (1) a basic understanding of statistical concepts for use in daily life and (2) use of statistical concepts and methods to facilitate study and research in other disciplines. Some of the topics covered in this course are basic probability, tree diagrams, mean, median, mode and range, standard deviation, permutations and combinations, box and whisker plots, the Normal Distribution, and measures of variability.

**Prerequisite:** Completion of Algebra I, Geometry, and Algebra II.

### **Advanced Placement Statistics, Grades 11 or 12**

The purpose of the AP course in statistics is to introduce students to the major concepts and tools for collecting, analyzing and drawing conclusions from data. Students are exposed to five broad conceptual themes:

1. Exploring Data: Describing patterns and departures from patterns
2. Sampling and Experimentation: Planning and conducting a study
3. Anticipating Patterns: Exploring random phenomena using probability and simulation
4. Statistical Inference: Estimating population parameters and testing hypotheses
5. Statistical Tools: Using technology to analyze and visualize data

**Prerequisite:** Completion of Algebra I, Geometry, and Algebra II, and permission of the department.

### **Calculus Honors, Grades 10, 11 or 12**

This course is perfect for a student who would like to continue on in the Calculus curriculum after PreCalculus, but is not interested in taking an AP class. The topics include an in-depth study of functions: algebraic, trigonometric, exponential, and logarithmic. Students investigate the concepts of limits and continuity, integration, and differentiation. Differential calculus and its applications to curve sketching, maximum and minimum problems, velocity, acceleration, and related rates of change are also explored in depth.

**Prerequisite:** Successful completion of the Algebra I, Geometry, and Algebra II sequence, and permission of the department.

### **Advanced Placement Calculus AB Grades 9, 10, 11 or 12**

This is the first of two Advanced Placement mathematics courses. The topics include the study of functions (algebraic, trigonometric, exponential, logarithmic, limits and continuity), differential calculus (and its application to curve sketching, maximum and minimum problems, velocity, acceleration, related rates of change), and integral calculus (with its application to area between curves and volumes of a solid of revolution).

**Prerequisites:** Completion of PreCalculus Honors with a strong academic performance and permission of teacher and approval of department chair.

### **Advanced Placement Calculus BC Grades 9, 10, 11 or 12**

This course is the second of two Advanced Placement courses. Advanced applications are applied to all the topics covered in Calculus AB. Additional topics covered are: infinite series, differential equations, improper integrals, L'Hopital's Rule, partial fractions, parametric equations, polar coordinates and vectors in a plane.

**Prerequisites:** Completion of Calculus AB or PreCalculus Honors, with a strong academic performance and permission of teacher and approval of department chair.

### **Linear Algebra Honors (Post AP), Grades 9, 10, 11, or 12**

The purpose of the course is for students to extend what was learned in AP Calculus AB, and advance their experiences with the mathematical world. This course provides an introduction to linear algebra topics, such as systems of equations, matrices, determinants, and vectors in two and three space as well as a concluding section on infinite series. Parametric and polar equations are introduced to model real world problems.

**Prerequisites:** Successful completion of AP Calculus AB, teacher recommendation, and permission of the department.

### **Multivariable Calculus Honors (Post AP), Grades 10, 11, or 12**

The purpose of the course is for students to extend what was learned in AP Calculus AB, and advance their experiences with the mathematical world. Students will discuss limits, continuity, differentiation, and integration in higher dimensions including partial derivatives and double and triple integrals. Parametric and polar equations in two and three space are used to facilitate relations that are not functions.

**Prerequisites:** Successful completion of AP Calculus AB, teacher recommendation, and permission of the department.

***Department: World Languages***

The principal goal of the World Language Department is to instill a love of language and an appreciation of the cultures beyond these languages. We encourage our students to achieve an excellent level of communication in speaking and in writing at the end of their third year requirement. Students may continue their study of language beyond the Advanced Placement level. Listening comprehension, speaking, reading, and writing are the traditional skills that are stressed throughout the world language experience. Field trips and trips abroad may be offered as further enrichment.

The middle school program offers students the opportunity to study Spanish in 6<sup>th</sup> grade. They may choose to continue to study Spanish or choose French in 7<sup>th</sup> and 8<sup>th</sup> grade and sometimes may be able to continue with two languages (based on their individual skills).

In Upper School, students need to complete through level III of one language: Spanish, French or Arabic. Courses are offered at the college preparatory and honors level and AP classes are offered in each language. The World Languages Department encourages students to pursue their studies beyond the three year requirement and/or to start another language.

**English as a Second Language, grades 6-12**

This class provides support for students who are learning English as a second language. It would be highly individualized and tailored to the unique cohort of students taking it. The class would seek to improve students' writing, reading, and public speaking skills.

It would be taken in place of a World Language in the Middle School, in place of Research & Writing in the 9th grade, and as an elective in grades 10-12.

*French***French I**

This is an introductory level course. For students who are experiencing foreign language instruction for the first time, this is a fundamental course which allows those students the opportunity to learn cooperatively. Awareness of and appreciation for the French speaking community and its culture are among the ultimate objectives of instruction.

**French II/French II Honors**

This course expands upon concepts presented in French Level I. Much more emphasis will be given to structure and verb tenses; new vocabulary acquisition will be a constant goal as will development of conversational ability. Awareness of and appreciation for the French speaking community and its culture are among the ultimate objectives of instruction.

**Prerequisite:** Successful completion of level I or teacher recommendation.

**French III/French III Honors**

French III emphasizes primarily the development of speaking skills with continuous work on listening comprehension, reading and writing skills. Students will increase their vocabulary and grammar skills so as to be able to converse more readily in French. Awareness of and appreciation for the Francophone world is a crucial objective of instruction at all times.

Class is conducted in the target language with the exception of grammatical explanations.

**French IV/French IV Honors**

This is an advanced proficiency course which serves to refine both oral and written communication skills with current and relevant vocabulary presented through authentic literary readings from France and the Francophone world. Literature texts are discussed and analyzed in the target language. French IV focuses on the more sophisticated grammatical structures of the language. Internet resources are used to enhance student learning.

## **Advanced Placement French Language and Culture**

AP French is a college-level course, which culminates in the Advanced Placement Examination sponsored by The College Board. Students who are successful in this course achieve fluency in the four disciplines of understanding, speaking, reading, and writing French.

**Prerequisites:** French IV Honors with strong academic performance and the permission of the teacher and recommendation of the department chairperson.

### *Spanish*

#### **Spanish 5**

Emphasis will be placed on oral proficiency; however, students will also be reading and producing limited writing. The general goal of this course is to continue to familiarize students with the spoken language (a continuation of the Fourth Grade program). Students will engage in simulations, projects, and activities that will place them in real-life situations and reinforce the subject matter. This one-year program will prepare students for entry into Spanish 6. There will be some overlap of material learned in fourth grade for review and to allow for new students to experience the language.

#### **Spanish 6**

Emphasis will be placed on oral proficiency; however, students will also be reading and producing limited writing. The general goal of this course is to continue to familiarize students with the spoken language (a continuation of the Fourth and Fifth Grade programs). Students will engage in simulations, projects, and activities that will place them in real-life situations and reinforce the subject matter. This one-year program will prepare students for entry into Spanish 7. There will be some overlap of material learned in fourth and fifth grades for review and to allow for new students to experience the language.

#### **Spanish 7**

This course for Middle School students is an introduction to the traditional high school Spanish Level I curriculum. It is for students in the 7<sup>th</sup> grade who are beginning or continuing their study of Spanish. Instruction emphasizes development of listening comprehension, speaking, reading, and writing skills in Spanish with a primary focus on oral proficiency. Students will engage in simulations, projects, and activities that will place them in real-life situations and reinforce the subject matter. An awareness of and appreciation for the Spanish speaking community is a supreme objective of instruction at all times. Materials include written text, short novels, live audio and online resources.

#### **Spanish 8**

This course for Middle School students is an introduction to the traditional high school Spanish Level II curriculum. It is geared towards students who did well in Spanish 7 during the course of the previous year. Instruction emphasizes development of listening comprehension, speaking, reading, and writing skills in Spanish with a primary focus on oral proficiency. Students will engage in simulations, projects, and activities that will place them in real-life situations and reinforce the subject matter. An awareness of and appreciation for the Spanish speaking community is a supreme objective of instruction at all times. Materials include written text, short novels, live audio, and online resources.

#### **Spanish I**

This course is for students who have not had Spanish or for those students who experienced difficulties in Spanish 7. The topics covered will be those included in the traditional high school curriculum for introductory Spanish. Instruction emphasizes development of listening comprehension, speaking, reading, and writing skills in Spanish with a primary focus on oral proficiency. Students will engage in simulations, projects, and activities that will place them in real-life situations and reinforce the subject matter. An awareness of and appreciation



for the Spanish speaking community is a supreme objective of instruction at all times. Materials include written text, short novels, live audio, and online resources.

### **Spanish II/Spanish II Honors**

This is a one-year course that expands upon concepts learned in Spanish 8 or Level I. Much more emphasis will be given to structure and verb tenses; new vocabulary acquisition will be a constant goal as will development of conversational ability. More emphasis will be placed on strengthening the reading and writing skills. Further appreciation of Spanish cultures will be a motivating force. Materials include texts, workbooks, audio, readers, and computer programs. The honors program includes increased vocabulary and strong emphasis on listening and speaking skills.

### **Spanish III**

Spanish III emphasizes primarily the development of speaking skills with continuous work on listening comprehension, reading and writing skills. Students will increase their vocabulary and grammar skills so as to be able to converse more readily in Spanish. Awareness of and appreciation for the Spanish speaking community is a supreme objective of instruction at all times.

### **Spanish III Honors**

This course expands upon concepts learned in Spanish I and in Spanish II. Reading and writing skills will increase to a much higher level of sophistication as students learn to deal with opinions, ideas, and concepts. A keen understanding of grammar will be encouraged. Vocabulary applications will reach new limits. Class is conducted in the target language with the exception of grammatical explanations.

### **Spanish IV**

Spanish IV aims to motivate students to use language creatively through engaging, student-centered role-playing, conversation starters, problem solving tasks and content-based activities. Students practice key language functions such as persuading, obtaining information, responding to requests, expressing preference and giving commands. Students will be exposed to current events and discussions of the same will be held. Class is conducted primarily in Spanish with the exception of some grammatical explanations.

### **Spanish IV Honors**

This course is an elective for students who have excelled in Spanish III (Honors). Spanish IV (Honors) primarily stresses sophisticated development of reading skills in Spanish. Students read literature by prominent Latin American and Spanish authors. In addition, writing skills are brought to a sophisticated level. Authentic materials from the media and the Internet serve as an integral part of the course curriculum. Spanish is spoken in class with the exception of some grammatical explanations.

### **Spanish Language and Culture (Spanish V) *(enrollment depending)***

This course is an elective for students who have completed Spanish IV and are interested in continuing to perfect their communication skills in both speaking and writing. Students will review basic grammar and expand their vocabulary. Speaking, reading, and writing will all be stressed. Admission to this course is based on a good level of performance in Spanish IV and teacher recommendation.

### **Advanced Placement Spanish Language**

AP Spanish Language is a college-level course, which culminates in the Advanced Placement Examination sponsored by The College Board. Students who are successful in this course achieve fluency in the four skills of listening comprehension, speaking, reading comprehension, and writing in Spanish.

**Prerequisite:** Spanish IV Honors with strong academic performance and the permission of the teacher and recommendation of the department chairperson.



**Advanced Placement Spanish Literature** (*enrollment depending*) AP Spanish Literature is a college-level course, which culminates in the Advanced Placement Examination sponsored by The College Board. This course is offered to students who have already taken the AP Language course. This course requires an intensive study in Spanish Literature.

**Prerequisites:** AP Spanish Language with strong academic performance and the permission of the teacher and recommendation of the department chairperson.

### **Spanish VI Honors (post AP) - Introduction to Hispanic Culture**

This course is an introduction to the cultural history of Spain and Latin America. Our main text is *Breve Historia Cultural de los Mundos Hispánicos* (open access) by Jacinto Choza y Esteban Ponce-Ortiz, complemented by discussions of films, artworks and shorter literary and historical texts. Students learn about the key events and the fundamental ideas and themes running through the cultures of Spain and Latin America across the centuries. Class discussions focus on processes of conquest and colonialism, nation formation, modernization, and on the changing roles of religion, race and gender. Through discussions, multi-draft compositions and in-class writings, students learn to critically read and understand Hispanic cultures, and to develop original arguments in written and spoken Spanish. This course is conducted in Spanish.

**Prerequisites:** AP Spanish, and permission of the department

### **Spanish VI Honors (post AP) - Introduction to Hispanic Literature**

Mirroring the format and requirements of a college-level seminar, this course offers an introduction to the critical reading of Hispanic literature through the analysis of selected literary texts from Spain and Spanish America. Students will gain an appreciation of different genres as well as a reflection on the concept of genre itself. The following three genres will be covered: narrative fiction (short story and novel), poetry, and theater. The course will also highlight the importance of socio-historical context to literary works by presenting texts from different historical periods. Learning outcomes: in the analyses of the selected texts from the three main literary genres (in class, as homework, as compositions), the course will introduce students to basic narratological, poetic, dramaturgical, and rhetorical terms and concepts used in the study of literature. Students will also learn how to discuss these terms and concepts analytically in oral and written Spanish as they gain knowledge of literary trends over time and from both sides of the Atlantic. Evaluation will be based on compositions (multi-draft projects), in-class writing activities, quizzes, and active participation, which includes the collection of homework. This course is conducted in Spanish.

**Prerequisites:** AP Spanish, and permission of the department

## *Arabic*

### **Arabic Language and Culture I**

This introductory course starts with learning the Arabic alphabet and focuses on the reading, writing, listening and speaking of Modern Arabic. It also explores cultural topics from the regions where Arabic is spoken.

### **Arabic Language and Culture II**

This course continues the introduction to Arabic. The goal is to engage with the Arabic language by studying and exercising speaking skills in Modern Standard Arabic (MSA) and Levantine dialect, by studying and exercising reading and writing skills in MSA and by exploring relevant cultural traditions. Students also research modern life in the Arab world.

### **Arabic Language and Culture III**

Students continue to use language for communication in "real life" situations. Students are asked to communicate in oral and written form, interpret oral and written messages, show cultural understanding when they communicate, and present oral and written information to various audiences for a variety of purposes.

### **Arabic Language and Culture IV**

This course will continue to reflect the emphasis of Arabic III on Modern Standard Arabic. Students will continue to build on the skills and strategies acquired for all listening, reading, speaking, writing and culture modalities. In addition to increased vocabulary repertoire, a greater emphasis will be placed on grammatical accuracy, thus providing a firm base to deal with more complex sentence structure, and larger spoken and written texts dealing with topics of general and daily interest.

### **World Language and Culture Across the Curriculum**

WLCAC courses aim to infuse world languages across the curriculum in order to complement and deepen the understanding of international cultures for each student outside the traditional language classroom. Classes are taught in English but actively incorporate intercultural perspectives. Each trimester of the proposed class will focus on one of the three traditional world language areas offered at SRDS.

### ***Department: Social Sciences***

The purpose of the study of history and the social sciences is to help students understand themselves and their relationships to history and culture through an investigation of the varieties of the human experience. The History and Social Sciences Department curriculum emphasizes a world perspective, which asks students to appreciate the global connectedness that has existed for most of human history. The curriculum in the middle and upper schools provides opportunities for students to investigate many areas of this experience: intellectual, aesthetic, religious, philosophical, political, economic, social, and psychological.

In the history and social sciences program for grades five through twelve, each course builds on certain skills students have acquired in previous grades. For example, students learn to analyze critically both primary and secondary sources. There is a strong emphasis in all courses on developing students' abilities to express themselves clearly and logically, both verbally and in writing. Many courses use art, literature, and music to enrich understanding.

In the Upper School, students are required to complete three year-long courses: Early World History, Modern World History or AP European History, and United States History. In addition to these required courses, the department offers a number of electives in history and the social sciences. Qualified students may also enroll in various Advanced Placement courses. In addition, students interested in contemporary domestic and international issues can become involved in related extracurricular activities often supported by the department.

### **5th Grade United States History: The United States- Beginnings Through the Civil War**

The main goal of fifth grade history is to give students an appreciation and understanding of the significance of people, places, and events that relate to the unique history of the United States; and an introduction to its government. As the fifth grade year begins, students strengthen their map skills by focusing on the Americas, investigating how the geography shaped the Pre-Columbian, and later colonial societies that developed there. Next, the students will take an in depth look at the American Revolution, as well as the formation of the United States of America and its government, paying close attention to the Constitution, and how the document has continued to adapt to meet the changes the country has undergone since its inception. The course will conclude with a study of the Civil War and the impact it had on American society, particularly, the sweeping social and political changes that came about from the Reconstruction Period.

### **6th Grade World History: The Ancient World Through the Renaissance**

As the sixth grade year begins, students will explore the world's early people, and how they lived and adapted to new environments over time. Next, the students will complete an in depth study of Mesopotamia, Ancient India, Ancient China, and a variety of other ancient civilizations. A thematic approach will allow the 6th graders to understand what made empires thrive and decline by making connections in the fields of geography, government, history, economics, and culture. We will use these themes as a framework for studying the world – its people, environments, cultures, and their interaction with one another. They look into the past, observe the present, and speculate about the future. The study of geography extends beyond maps, and the sixth grade geography course prepares students to be global citizens. Students utilize technology and traditional sources of information to research and gather data to analyze and apply theories to draw conclusions, growing as critical thinkers in examining the world.

### **7th Grade World History**

The World History: Birth of Modernity curriculum challenges SRDS students to think critically about the rise of the globalized world along with the systems and structures of modern nation states. As an early modern survey course, students will thoroughly explore the development of the Western World from the fall of Rome to the Age of Enlightenment. Students will analyze the changing social structures which led to revolutions in government, economic development, globalized trade and exploration, artistic evolution, religious schisms, and new political thought. A preliminary study of political science, civics, economics, western religions, and classical civilizations will lay the groundwork for diving deep into each historical era. Students will consider the differences between primary and secondary evidence, the impact of bias in recorded history, the effect of diverse voices on our historic narrative, and the interplay between culture, social hierarchy, and human development.

### **8th Grade US History: Civil War to the Present**

This eighth grade course covers the time period from the colonial era through the present day, focusing on civics, government, and connecting these themes to current events. Students will start the year off looking at westward expansion and the Industrial Age, identifying how immigration and rapid urban growth shaped life in the United States. Next, the students will look at how World War I impacted America and transformed Europe. Additionally, students will study the Roaring Twenties and the Great Depression, and discuss how society changed during these two vastly different periods in American history. Finally, they will explore the twenty-first century and how the United States is different today compared to 1776. Other themes to be explored include: identity; culture and community; social justice; and conflict, adversity, change and transition.

### **Early World History: 10,000 BCE-1200 CE/Early World History: 10,000 BCE-1200 CE Honors, Grade 9**

The course will investigate Early World History, starting in the paleolithic era and running up to the breakdown and restructuring of networks following the Black Death. Given the immense scope of the course, students will investigate history through the themes of migration, geography, culture, technology, and the expansion of networks of exchange. These themes will relate to themes present in our AP Human Geography course, and will give students of all levels a more even content experience in our 9th grade program. Students will use this content to develop historical skills and practices such as analyzing primary and secondary sources; developing historical arguments; making historical comparisons; and utilizing reasoning about contextualization, causation, and continuity and change over time. The Honors level would include a major research project component, as well as additional readings and more rigorous expectations/requirements for assignments.

### **Advanced Placement Human Geography, Grade 9**

This course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine socio-economic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. AP Human Geography will provide our most advanced freshmen with an opportunity to shine beyond an "Honors" label. This course is designed to mirror college level Human Geography and allows for Advanced Placement credit with success on the AP exam in May.

**Prerequisite:** Permission of the Department

### **Modern World History/ Modern World History Honors, Grade 10**

The course will investigate Modern World History, starting with the emergence of Global Empires of the 13 and 14th centuries and continuing on to the present day. Students will continue to investigate history through the same themes of migration, geography, culture, technology, and the expansion of networks of exchange to make sense of the immense scope of the spatial and temporal scales of the course. These themes will relate to themes present in our AP World or AP European courses, and will give students of all levels a more even content experience in our 10th grade program. Students will use this content to continue to develop historical skills and practices such as analyzing primary and secondary sources; developing historical arguments; making historical comparisons; and utilizing reasoning about contextualization, causation, and continuity and change over time. The Honors level would include a major research project component, as well as additional readings and more rigorous expectations/requirements for assignments.

### **United States History: 1200-Present/United States History: 1200-Present Honors, Grade 11**

This eleventh-grade course provides a survey of United States history from before colonial times to the present. It focuses on those issues and themes that have emerged to shape American culture, politics, and policies, both foreign and domestic. Since these issues and themes did not happen in a vacuum, there is also an emphasis on presenting American history within a global context and as part of a larger world history. Meanwhile, the course emphasizes skills in critical analysis that require students to locate, evaluate, and integrate different kinds of historical data. Students then present their findings through debates, frequent essays, and other assessments.

### **Advanced Placement United States History Grade 11**

This college-level course in American history traces the development of American culture from before the first contacts of Native Americans with Europeans to the modern era. Readings from primary and secondary sources, as well as class discussions, offer students the opportunity to delve deeply into the political, social, and economic values of American society as they evolved over time. There are frequent analytical and document-based question essay assignments, as well as a required research paper. Students are required to take the A.P. national examination in May.

**Prerequisite:** Strong academic performance and the permission of the teacher and recommendation of the department chairperson.

### *Social Science Electives*

#### **Psychology Grades 9, 10, 11, or 12**

This year-long course offers straightforward explanations of the basic themes of psychology, while focusing on psychology's relevance to the individual. Selected topics include neuroscience, learning, memory, personality, and psychological disorders, all with a focus on gender and culture.

#### **Philosophy and Ethics, Grades 11 or 12**

The purpose of this course is to enhance the SRDS community through open discussion about some of the most profound questions of humanity. Students will read, analyze, and assess the ideas of many of the greatest

thinkers in the history of the world. Through oral and written expression, they will explore complicated questions, look past simplistic answers, and develop an understanding and appreciation for the inherent complexity of life.

### **Middle Eastern Studies, Grades 10-12**

In 2011, thousands of Egyptians gathered to demand the fall of their nation's dictatorial regime as a part of what would later come to be known as the Arab Spring. This unrest spilled across borders, escalating to armed conflict in Syria where, at the U.N.'s last estimate, over 11 million Syrians have been forced to flee from their homes. The goal of this yearlong course is to better understand the Middle East through the lenses of history, politics, culture, religion, and art. This course will emphasize independent research of primary and secondary sources to investigate the lived experience of people involved. These experiences will include, among others, those of Egyptian revolutionaries, Syrian refugees, American soldiers, and Israeli civilians. We will investigate a variety of media (movies, books, sermons, blog posts, etc.), communicate via Skype with people who have relevant first-hand experience, synthesize the stories we encounter, and share our findings with the larger Saddle River community. Each student will be responsible for choosing areas of focus to investigate from multiple perspectives and using multiple lenses. Students will practice the skills of research, discussion, and presentation and, in doing so, learn more about a much-misunderstood region of our world.

### **Advanced Placement Macroeconomics, Grades 11 or 12**

AP Macroeconomics is an introductory college-level course that focuses on the principles that apply to an economic system as a whole. The course places particular emphasis on the study of national income and price-level determination; it also develops students' familiarity with economic performance measures, the financial sector, stabilization policies, economic growth, and international economics. Students learn to use graphs, charts, and data to analyze, describe, and explain economic concepts.

**Prerequisite:** Strong academic performance, proficiency with graphing and the permission of the teacher and recommendation of the department chairperson.

### **Advanced Placement European History, Grade 10, 11, or 12**

This course is offered to tenth or twelfth grade students who wish to pursue the rigors of an advanced placement course in European History. The scope of the course extends from the emergence of "modern" Europe in the 1400's (the Renaissance) to the present day (the end of the Cold War and after). The course focuses on the study of the interaction of political, economic, social, religious, cultural, and intellectual factors that best explains the historical narrative of European history. Emphasis is placed on developing the student's skills concerning the interpretation of primary sources, which is an important part of this course and the national examination as well. Numerous readings in texts and secondary materials as well as historiographical essays make up the bulk of assignments. Research and writing skills are honed through various types of projects. Students are required to take the national exam in May.

**Prerequisite:** Teacher recommendation, and permission of the Department

### **Advanced Placement World History, Grades 10, 11, or 12**

The AP World History course focuses on developing students' understanding of world history from approximately 1200 CE to the present. This college-level course has students investigate the content of world history for significant events, individuals, developments, and processes in six historical periods, and develop and use the same thinking skills and methods (analyzing primary and secondary sources, making historical comparisons, chronological reasoning, and argumentation) employed by historians when they study the past. The course also provides five themes (interaction between humans and the environment; development and interaction of cultures; state building, expansion, and conflict; creation, expansion, and interaction of economic systems; development and transformation of social structures) that students explore throughout the course in order to make connections among historical developments in different times and places encompassing the five major geographical regions of the globe: Africa, the Americas, Asia, Europe, and Oceania.

**Prerequisite:** Strong academic performance and the permission of the teacher and recommendation of the department chairperson.

### **Advanced Placement Psychology, Grade 12**

AP Psychology is an introductory college-level psychology course. Students cultivate their understanding of the systematic and scientific study of human behavior and mental processes through inquiry-based investigations as they explore concepts like the biological bases of behavior, sensation and perception, learning and cognition, motivation, developmental psychology, testing and individual differences, treatment of abnormal behavior, and social psychology.

**Prerequisite:** Psychology, and permission of the department.

### **Business & Entrepreneurship, grades 8-12**

This course introduces students to the dynamic processes and activities in Business and Entrepreneurship. The course develops student understanding and skills in the functional areas of business, entrepreneurship, marketing, business law, communication skills, customer relations, economics, human resources management, and operations. Current technology will be used to acquire information and to complete activities. Throughout the course, students are presented ethical dilemmas and problem-solving situations for which they must apply academic and critical-thinking skills. Students learn the proper foundations of turning an idea into an opportunity from ideation and pitching an idea to the elements of a business plan.

### **Business & Entrepreneurship II, grades 9-12**

This course is designed to provide students with a solid foundation in understanding the functional areas of business and Entrepreneurship. Major topics covered: the economic, legal, social and global environment in which modern businesses operate; social responsibilities of business; forms of business ownership; functions and responsibilities of managers; and fundamental concepts of marketing, accounting, finance, information management, and human resources. Students will learn to write a (modified) business plan and present his/her plan to the class. When available guest speakers may also be invited to present to the class.

**Prerequisite:** Business & Entrepreneurship I, or permission of the department.

### **Business & Entrepreneurship III, grades 9-12**

This course is designed as a seminar style class that allows students to apply the knowledge acquired in Business and Entrepreneurship I and Business and Entrepreneurship II. Students work with a startup company to write their business plan for potential investors and employees. The students meet with business owners regularly to develop the company's vision, mission and product descriptions. They discuss accounting and budgeting with the Director of Operations and meet with the head of marketing to develop those sections of the business plan. The second half of the year students will be developing a product to take to production. Students will write a business plan and present his/her plan to the class. When available guest speakers may also be invited to present to the class. In addition, it is anticipated that students will participate in an intern/shadowing program one afternoon a week to gain some real-world experience.

**Prerequisite:** Business & Entrepreneurship II, or permission of the department.

### **Business & Entrepreneurship IV, grades 9-12**

This course is designed as a seminar style class that allows students to apply the knowledge acquired in Business and Entrepreneurship I and Business and Entrepreneurship II. Students work with a startup company to write their business plan for potential investors and employees. The students meet with business owners regularly to develop the company's vision, mission and product descriptions. They discuss accounting and budgeting with the Director of Operations and meet with the head of marketing to develop those sections of the business plan. The second half of the year students will be developing a product to take to production. Students will write a business plan and present his/her plan to the class. When available guest speakers may also be



invited to present to the class. In addition, it is anticipated that students will participate in an intern/shadowing program one afternoon a week to gain some real-world experience.

**Prerequisite:** Business & Entrepreneurship III, or permission of the department.

### ***Department: Science***

The science department's courses are designed to be comprehensive as well as diverse in order to meet the needs of every student. Throughout middle school and upper school, the cohesive science program emphasizes growth in a core set of science skills. Middle school science exposes students to topics in life science, earth science, conceptual physics, and engineering. In the upper school, three years of laboratory science, including one year of biology and one year of chemistry, are required for graduation. Alongside the traditional sciences, several elective lab courses are offered, as well as an array of computer science courses. Advanced placement science courses are offered for those students who demonstrate an extremely high aptitude in science.

### **Science 5**

In 5th grade science, students take a hands-on, discovery-centered approach to learning 21st century skills in a laboratory setting. The inquiry-based curriculum fosters critical thinking skills and creative problem solving. The course content focuses on topics from life science, physical science, and earth science. During the life science unit, students discuss topics such as the interactions within an ecosystem. The physical science unit introduces students to physical properties and changes of matter. Finally, students journey to space during the earth science unit to explore our solar system and concepts such as seasons, day vs. night, and the phases of the moon.

### **Science 6**

In 6th grade science, students continue to discover and problem solve as they explore an integrated curriculum of earth, life, and physical science. Topics in physical science include forces and motion. Students investigate how forces affect our daily lives through Newton's Laws of Motion and then they explore simple machines that help make our lives easier. Life science topics focus on the human body systems and how these systems interact with one another to perform daily functions. Students end the year learning about the history of the Earth and how the movements of plates cause several natural events such as earthquakes, volcanic eruptions, and tsunamis, as well as how changes in the earth's geography continue to affect our planet.

### **Science 7: Physical Science**

Science in 7th grade is a hands-on, inquiry-based approach to understanding the nature and structure of matter and the interactions of matter and energy. The focus of the curriculum is on the application of physical science principles and developing 21st century skills. During the first half of the year, students explore topics that include the atomic structure of matter and how matter changes physically and chemically, and the organization and use of the periodic table. STEM projects such as building boats and creating superheroes are highlights of the first semester. The second half of the year focuses on how matter interacts with energy. Students investigate forces and motion, as well as the concepts of energy transfer and the need for energy sources. Projects include building race cars, roller coasters, and solar powered devices.

### **Science 8: Applied Science**

The curriculum for 8th grade science centers around an understanding of the natural and physical world in which we live. Real world connections are made as students explore topics in physical science, life science, chemistry, and engineering. The hands-on, project-based curriculum allows students to engage in lab activities

and design projects which will not only enhance their skills in communication, collaboration, critical thinking and creativity, but will help prepare them for the rigors of Upper School science.

### **Biology/Biology Honors Grade 9**

This course introduces the study of life by covering a broad range of topics, from tiny biomolecules to entire ecosystems. Students explore the course content and develop core science skills through lab investigations, project-based units, hands-on activities, and class discussions. The course begins by focusing on life at the cellular level and covers topics including biochemistry, cellular anatomy, cellular processes, and cell division. In the spring, students connect their knowledge of cells to the biology of entire organisms and populations as they explore genetics, the central dogma, and evolution. Recurring themes throughout the year include experimental design, scientific argumentation, and real-world applications.

Students in the honors level course take an inquiry-based approach to labs and complete rigorous assignments designed to further hone their critical thinking and reasoning skills. At this level, the course covers some advanced biology topics and dives deeper into molecular biology.

### **Chemistry/Chemistry Honors Grade 10**

This is an introductory-level course designed to provide students with a basic understanding of the principles and concepts of chemistry. The course covers a broad range of topics, including atomic structure, chemical bonding, chemical reactions, solutions, acids and bases, and stoichiometry. Students in this course learn how to use the periodic table, write chemical equations, and conduct laboratory experiments. The curriculum is designed to help students develop problem-solving skills, critical thinking, and scientific literacy. The course is taught through a combination of lectures, class discussions, and laboratory work, which provide students with hands-on experience in conducting experiments and analyzing data.

The honors level course is rigorous and designed for students with a strong interest and aptitude in chemistry. It builds on foundational concepts and covers topics like reactions in aqueous solutions, bonding, stoichiometry, and atomic structure. Students are expected to have a solid understanding of algebra and engage in laboratory work to conduct experiments, analyze data, and write formal lab reports. This course fosters critical thinking, creativity, and collaboration, and prepares students for further study in college-level chemistry and related fields.

**Prerequisites:** Chemistry CP – Biology and Alg I. Chemistry Honors – Completion of Biology or Biology Honors AND completion or concurrent enrollment in Algebra II or Algebra II Honors with teacher recommendation and permission of the Department Chair.

*Science Electives* - these classes meet the science graduation requirement if taken for a full year.

### **Physics/Physics Honors Grades 11 or 12**

This course is designed to introduce students to a detailed, analytical study of the physical world. Precise and accurate measurement methods are utilized during observations to describe or interpret general laws of nature. Theoretical and higher mathematical concepts and skills are also used to reach this understanding of the laws. The theme underlying the course is the development of a conceptual understanding of the physical world, and using problem-solving skills to further that understanding. Students find that, rather than making the material less accessible, equations and formulae can be used to increase understanding.

**Prerequisites:** Physics CP – Biology, Chemistry, Algebra II. Physics Honors – Biology, Chemistry, at least concurrent enrollment in Precalculus or higher with teacher recommendation and permission of the Department Chair.



**Environmental Science Honors, Grades 11 or 12**

Environmental science is a comprehensive science elective applying the fundamentals of biology, chemistry and physics to challenges facing the environment today. The course is taught using case studies to illustrate scientific topics. It is a lab science course that delves into the impact of humans on our environment. We study the effects and try to find ways to alleviate some of the negative consequences in our own lives. Students will engage with current environmental science topics across the curriculum. A heavy writing course, we use art, economic principles, historical background and science to explore different topics.

**Prerequisite:** Biology, Chemistry, Algebra II and teacher recommendation

**Forensic Science/Honors Forensic Science Grades 11 or 12**

Forensic science is the application of science to criminal and civil laws. This course will study relevant scientific and technological principles and techniques that are used to solve crimes. Topics in this course are arranged to integrate scientific methodology with actual forensic applications. The course will include a wide variety of laboratory methods and forensic cases to give students valuable opportunities for interactive hands-on experiences and to develop problem-solving and critical-thinking skills.

**Prerequisite:** Biology, Chemistry, completion or concurrent enrollment in Algebra II

**Human Anatomy and Physiology Honors, Grades 11 or 12**

This course is designed for students who have a strong foundation in biology and are interested in gaining a deeper understanding of human anatomy and physiology. The course will cover the structure and function of the human body at the cellular, tissue, organ, and system levels, with an emphasis on how these different levels interact to maintain homeostasis. Students will explore the major organ systems of the body, including the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, respiratory, digestive, urinary, and reproductive systems. They will learn about the physiology of each system, including how it works, how it is regulated, and how it contributes to overall health and wellness.

**Prerequisite:** Biology, Chemistry, and teacher recommendation

**Applied Physics and Engineering/Applied Physics and Engineering Honors, Grades 11 or 12**

This project-based course provides each student with an overview of the fields and methods of engineering and introduces skills basic to the field of engineering. After an introduction to the steps of the engineering design process in the first term, students will explore disciplines in civil, mechanical, aerospace and bioengineering. They will apply the engineering design process and applicable scientific principles to design projects throughout the year.

**Prerequisite:** Biology, Chemistry, completion or concurrent enrollment in Algebra II

**Astronomy and Space Science, Grades 11 and 12**

Students in high school develop understanding of a wide range of topics in Astronomy and Space Science that build upon science concepts from middle school through more advanced content and practice. The course will focus on the nature of what is and is not understandable about the universe through historical and current observations of the universe. Conceptual ideas such as why stars shine, the history of the solar system, and the fate of the universe are discussed. Students will be expected to meet once per trimester outside of class for observing.

**Prerequisite:** Biology, Chemistry, completion or concurrent enrollment in Algebra II

**Advanced Placement Biology, Grades 11-12**

Advanced Placement Biology is a rigorous, college-level course that pushes students to think beyond memorization. Students will be challenged to think critically and creatively, to write clearly, and to utilize reasoning and quantitative skills. The course content centers on four interrelated big ideas: evolution, energetics, information storage and transmission, and systems interactions. While the big ideas will be interwoven throughout the course, the unit content starts with life on the molecular and cellular levels and expands to life

from an evolutionary and ecological perspective. Through inquiry-based labs and hands-on activities, students develop core science skills and gain first-hand experience in the scientific process.

**Prerequisites:** Biology, Chemistry, strong academic performance, permission of the teacher and the Department Chair.

### **Advanced Placement Chemistry, Grades 11-12**

The AP Chemistry course is a college-level chemistry course designed for high school students who have a strong interest in science and who wish to pursue higher education in STEM fields. The course covers the fundamental principles of chemistry, including atomic structure, chemical bonding, chemical reactions, thermodynamics, kinetics, and equilibrium. Students in this course are expected to have a strong foundation in algebra and be able to apply mathematical concepts to solve complex chemistry problems. The curriculum emphasizes laboratory work, where students conduct experiments, analyze data, and write formal lab reports. The course culminates in an AP exam, which assesses students' understanding of the course material and grants college credit for successful performance. An AP Chemistry course provides students with a challenging and rewarding experience that prepares them for college-level coursework in chemistry and related fields.

**Prerequisites:** Biology, Chemistry, Physics, Precalculus, strong academic performance, and permission of the teacher and the Department Chair.

### **Advanced Placement Physics C: Mechanics, Grades 11-12**

This course is designed for students with a strong interest in a career in physics, physical science, or engineering. It is a rigorous calculus-based physics course that prepares students for the Advanced Placement Physics C: Mechanics Exam. Topics include kinematics, linear and rotational dynamics, gravitation, and oscillations.

**Prerequisites:** Biology, Chemistry, Physics, Precalculus, strong academic performance, permission of the teacher and the Department Chair.

### **Independent Research with *Drosophila melanogaster*, Grades 11 or 12**

This advanced research course provides students with the opportunity to design and implement their own research project using the model organism *Drosophila melanogaster*, otherwise known as the fruit fly. Due to its short life cycle and easily tractable genetics, the fruit fly has been used in research laboratories for over a century. Fruit flies share about 60% of our DNA and can be attributed to major advancements in fields ranging from sleep and circadian rhythm to cancer and immunity. In fact, six research groups to date have been awarded Nobel Prizes for their work with fruit flies. This course will introduce the history of *Drosophila* research and the basics of fruit fly maintenance. Students will learn how to develop a research question, design experiments, analyze data, read and write scientific papers, and create professional scientific posters to communicate their findings. By conducting their own research project, students will develop the skills used by real research scientists to uncover the secrets of health and disease.

**Prerequisites:** Successful completion of or concurrent enrollment in AP Biology and permission of the Department Chair.

These electives are in the science department but do not meet the graduation requirements of a full-year laboratory science.

### **Professional Science: Introduction to the Research Process (Summer), Grades 7 to 11**

Ever wonder what the job of a scientist actually entails? While many real scientists wear lab coats and mix mysterious substances, all scientists - whether they be the epidemiologists trying to understand a novel disease (think Covid!), or computer scientists and engineers trying to bring quantum computing to your fingertips, or climate scientists trying to predict the fate of our planet - follow the same basic research process. In this class, you will learn the steps professional scientists take in every project they do, from interpreting existing research

papers, to data analysis techniques, to communicating research to other scientists and the broader society. Whether you just want a deeper understanding of how scientific knowledge is created, or you are interested in doing scientific research yourself, take your science literacy one step further than your traditional science classes in this 5-week, project-based research course.

No prerequisite course.

### **Computer Science I**

This computer science course provides students with an introductory level understanding of computer programming. Students learn the fundamentals of program design and programming languages. Projects are assigned for each topic that allow students to gain and develop proficiency at planning, writing and executing programs.

### **Computer Science Principles**

Computer Science Principles is a course that teaches the principles, big ideas, and practices of computer science. The goal is to ensure that all students are introduced to the broad spectrum of these that make up the essence of computer science. This course enables students to experience the creative and intellectual possibilities—the“beauty” of computing through their participation. Students will become proficient in the computational thinking practices that are embedded within this curriculum.

**Prerequisites:** Computer Science I

### **Advanced Placement Computer Science Principles**

AP Computer Science Principles is a course that teaches the principles, big ideas, and practices of computer science culminating in completing the APCSP exam. The goal is to ensure that all students are introduced to the broad spectrum of these that make up the essence of computer science. This course enables students to experience the creative and intellectual possibilities—the“beauty” of computing through their participation. Students will submit two performance tasks defined and required by the AP, and participate in the exam at the end of the year.

**Prerequisites:** Computer Science I

### **Advanced Placement Computer Science A**

AP Computer Science A is equivalent to a first-semester, college-level course in computer science. The course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design using Java language. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. The AP Computer Science A course curriculum is compatible with many CS1 courses in colleges and universities.

**Prerequisites:** AP Computer Science Principles

### **Artificial Intelligence Honors (Post AP)**

This course will enable you to take the first step toward making your own Artificial Intelligence (AI). In this course, students will learn to implement fundamental problem-solving search algorithms and will develop skills in representation and reasoning, pattern recognition, fuzzy logic, and neural networks. Students will learn about the theory behind graph search algorithms, categorization, optimization, reinforcement learning, and other artificial intelligence and machine learning topics through hands-on projects, which they will incorporate into their own Python applications.

**Prerequisites:** Successful completion of AP Computer Science Principles or AP Computer Science A

### **Natural language processing Honors (Post AP)**

This course will enable you to take the first step toward making your own personal assistant. It will provide you with an introduction to the field of computational linguistics -- the study of human language using the tools and techniques of computer science. Through hands-on projects, students will explore ideas of linguistics, statistical modeling, and machine learning, which they will incorporate into their own Python applications.

**Pre-Requisites:** Successful completion of AP Computer Science Principles or AP Computer Science A

### ***Department: Performing Arts - Theater, Instrumental and Choral Music***

SRDS has a dynamic and diverse instrumental music program that provides a solid foundation of the skills needed to play an instrument and to perform with it in an ensemble. Instruction begins in the Lower School, continues through the Middle School, and culminates with our students participating in our Upper School Band, Jazz Ensemble, String Ensemble, and Guitar Ensemble.

The choral program is designed to provide the opportunity for each student in grades pK-12 to learn the proper vocal techniques and skills needed to perform various vocal repertoire. Special emphasis is placed on learning rudimentary skills such as proper air support, proper resonance, sight-reading, audible acuity, blending, style, and showmanship. Participation in an SRDS choir provides opportunities for the students to express their personal creativity, build their self-esteem, learn self-discipline, and master a variety of skills which can be applied to their lives both on and off the stage.

### **Upper School Acting** (a series of trimester long courses taken individually or yearlong)

A trimester long course meeting three periods per week. Students register for as many or as few trimesters as they wish. The class is project-based, with a live or recorded performance given each trimester to demonstrate the work of the trimester. Trimester 1 covers the fundamentals of acting including exposure to and practice of different techniques and schools of acting. Trimester 2 is split between: 1. The exploration of the difference between tragedy and comedy and the specific techniques used therein. 2. Improvisation in both pure “improv” groups and within traditional stage and film acting. Trimester 3 is devoted to musical theater. The students learn the history of American Musical Theater as it evolved from earlier popular art forms, and explore the various fundamental techniques of stage acting and dancing that are the essential building blocks of musical theater performance.

### **Music Theory I**

Students who wish to further their musical education by ensuring their knowledge of the fundamentals of music should register for Music Theory. The topics of the class include note and rhythmic notation, key signatures, time signatures, scales, modes, chords, and elementary musical forms.

### **Music Theory II**

Students who have completed Music Theory I or have passed the SRDS music theory proficiency test may register for Music Theory 2. The topics of the class include harmonic analysis, four-part harmony of melodies, counterpoint, elementary composition and arranging, chord construction and analysis, and chord/scale relationships. The techniques studied are based on the common practice period in classical music as well as those of modern jazz and popular music.

**Prerequisite:** Completion of Music Theory I, and permission of the department chair.

### **Music Theory III**

Those students who have completed Music Theory II or have passed an advanced music theory placement test may register for Music Theory III. In Music Theory III, the students follow a rigorous course of review of theory fundamentals, and throughout the year they have weekly ear-training assignments. Simultaneously, the students complete a series of projects developed by the teacher while carefully considering each student's artistic path. Examples of possible projects include in-depth composition, arranging, and orchestration assignments, 18th-century counterpoint studies, and analysis of orchestra compositions. Successful completion of MT3 prepares a student for college music theory entrance examinations for both classical and jazz/pop disciplines.

**Prerequisite:** Completion of Music Theory II, and permission of the department chair.

### **Advanced Placement Music Theory**

AP Music Theory is an introductory college-level music theory course. Students cultivate their understanding of music theory through analyzing performed and notated music as they explore concepts like pitch, rhythm, form, and musical design. Meets 3x per week.

**Prerequisite:** Permission of the instructor.

### **Fifth Grade Band and Strings**

All fifth grade students learn to play a woodwind, brass, string or percussion instrument which they play in the Fifth Grade Band or String Class. In addition to their ensemble rehearsal, each student receives lessons with other students on the same or similar instruments. The Band and String Class play two concerts each year.

### **Middle School General Music**

Those students in grades six, seven, and eight who do not wish to perform in the chorus, band, or string ensemble should register for Middle School General Music. This course meets twice a week and fulfills a student's Middle School Music Requirement for the year. The curriculum focuses on the growth of American popular music from the years 1900-2023, including the study of notable trends, chart-topping singers of multiple generations, and the effect this music had on historical events of the time and vice versa. The course includes mixed media observations (video, music, internet), as well as group and individual projects focusing on the music of the past and the potential of the future. There is a unit focusing on music theory and how to write out music. Students learn about the progression of music technology, from gramophones to bluetooth speakers, records to streaming services. The course culminates with an in-depth look into the music of today and allows the students a chance to showcase what music makes them tick. Students are permitted to take the course more than once. Students are required to bring their laptop to class to use during individual listening and research times during class, and for use during music technology units that incorporate notation and recording software such as Musescore, Soundtrap, and GarageBand.

### **Middle School Choirs, Grade 5 and Grades 6 - 7 - 8**

There are two Middle School choirs: one for students in grades 5 and 6 and one for grades 7 and 8. Rehearsal time is spent learning the different pieces, establishing proper vocal techniques and gaining fundamental musical knowledge. The concert pieces include arrangements of selections from Broadway shows, current popular songs, classical choral pieces and pieces written for student choirs. The students are encouraged to take part in the programming process of performances. The choir performs at least two concerts each year.

### **Sixth Grade Band**

Woodwind, Brass, and Percussion students in the sixth grade may join the Sixth Grade Band. The group continues the laying of a solid foundation of musical skills that was started in the Fifth Grade Band. More

complex pieces of music are explored and the students develop the techniques necessary to play in The Middle School Band (Grades 7-8)

### **Middle School Band, Grades 7-8**

Middle School students who have played a woodwind, brass, string or percussion instrument for at least one year may register for 7th-8th Grade Band. The repertoire of the group includes classic and contemporary music written for middle school students as well as arrangements of popular music and large-ensemble jazz selections. The band performs at least two concerts each school year.

### **Middle School Strings, Grades 6, 7, and 8**

Middle School students who have played the violin, viola, cello, or bass violin for at least one year may join The Middle School Strings. The repertoire is primarily classical music, with some pop/jazz pieces played occasionally.

### **8th Grade Theater Arts**

Eighth Grade students may register for 8th grade Theater Arts. In this course, the students study the many elements of a theater production, including set design and building, lighting design and operation, stage management, as well as acting and directing. This class can fulfill an eighth grade student's performing arts requirement. The class meets once per week.

### **Upper School Band, Grades 9 – 12**

Students who play a woodwind, brass, or percussion instrument may register for Upper School Band. The repertoire of the group includes classic and contemporary works for chamber orchestra and concert band as well as pops and large-ensemble jazz selections. The concert selections include pieces by composers such as James Swearingen, Duke Ellington, and Ludwig van Beethoven. The band performs at least two concerts each school year.

### **Concert Choir, Grades 9 – 12**

In Concert Choir, students develop their own musical potential and the skills necessary to be a vocal musician. Rehearsals focus on vocal technique, musicianship, learning to sing in harmony, and performance practice. The group's repertoire consists of a variety of styles including arrangements of popular songs, Broadway selections, as well as choral classics. The Choir performs at our Winter and Spring concerts and often at special school events.

### **US Jazz Ensemble, Grades 9 – 12**

Jazz Ensemble is open to students who play any instrument proficiently and wish to learn the art of jazz improvisation. All instruments are welcome, including piano, guitar, bass, drums, and all brass, woodwind and string instruments. The ensemble learns primarily classic jazz tunes by artists such as Duke Ellington, Thelonius Monk, Horace Silver and Charlie Parker. Each student learns how to improvise over the chords of the tunes the ensemble learns. The ensemble performs at least two concerts each school year.

### **US String Ensemble, Grades 9 – 12**

Upper School String Ensemble is open to students who play violin, viola, cello, bass, or piano. The ensemble learns repertoire primarily written by pillars of classical music, such as Bach, Mozart, Beethoven, Telemann and Schubert. The ensemble performs at least two concerts each school year.

### **Vocal Master Class, Grades 9-12**

Vocal Master Class is offered to students who are already enrolled in Concert Choir. This advanced group focuses on solo singing in the Master Class style format. Students will learn to perform songs as a soloist in



genres such as Musical Theater, Classical, and Pop and they will develop the skills necessary to be an effective, vocally healthy and safe solo singer. Students will perform regularly during class time in front of their peers and teacher as well at public performances. (co-requisite requirement: Concert Choir) Meets 2x per week.

***Department: Visual Arts - Studio and Graphic Arts***

The visual arts are a means to gain personal satisfaction through individual accomplishment in the creation of images and forms. The program is solidly based on a respect and understanding of where students are creatively, what they require from their work, and the means to move them from one developmental stage to another as they become more expressive, inventive, and perceptive. The program focuses on artistic creation as the central component throughout, with perceptual and reflective elements growing out of the students' active involvement with materials and processes. Through expressive/creative experiences, students become familiar with such facets of artistic thinking as; the ability to formulate problems and create multiple solutions, the ability to pursue a project over time, the willingness to solve problems inventively, the ability to take risks, and finally to reflect critically on one's own work. Students develop a way of thinking that functions beyond the studio into other areas of the curriculum.

The program focuses primarily on the uniqueness of the individual, fostering and valuing the specific expressive qualities and interests of each student as she/he progresses through PreK3 - 12. Collaborative work exists, but its goals are secondary to the individual.

**Art Grade 5**

The visual arts require students to participate in art production, creating imagery or objects by means of drawing, painting, printmaking, and sculpture. Throughout the year, Fifth grade students will develop an enhanced understanding of the elements of art; Line, Shape, Color, Value, Form, Texture, and Space. And the principles of design; Balance, Contrast, Emphasis, Rhythm, Movement, Pattern and Unity. Art activities will focus on expanding their knowledge of these elements & principles while engaging the students in an experience that will not only be rich in itself, but lead to personal growth. Projects involve the students in imagining, exploring, reasoning, and inventing while experimenting with a plethora of materials and techniques. Students will create artwork inspired by art history, diverse cultures, and their perceptual awareness of their environment. Fifth grade meets for art class twice a week, and their artwork is exhibited in the school wide art show at the end of the year.

**Art Grade 6**

The grade six Art course continues to build upon and reinforce basic skills learned throughout the Lower School Art Program. The elements and principles of design are the building blocks of art study. These concepts will be expanded on as the students grow through a variety of projects, techniques and materials presented. The students will learn about a number of artists, styles and cultures throughout the middle school years. This class meets twice a week. The students will receive a numerical grade based on a point system.

**Art Grade 7**

This class meets twice a week. The course takes the students through a creative experience by the use of a variety of media. They will explore and experiment with basic art elements and principles and they will develop artistic skills through the systematic introduction to 1) the sensory properties of objects - color, line, shape; 2) the format properties of design - balance and rhythm, harmony; 3) the technical properties of tools and materials, 4) the expressive properties of moods, feelings, and ideas; and 5) the introduction of technology as a tool to generate art. The students will receive a numerical grade.

**Art Grade 8**

This course is the culmination of the middle school art program. Through creative experiences, students become familiar with such facets of artistic thinking as: the ability to formulate problems and create multiple solutions, the ability to pursue a project over time; the willingness to solve problems inventively, the ability to take risks, and finally to reflect critically on one's own work. Students develop a way of thinking that functions beyond the studio into other areas of the curriculum. The students are required to keep a sketchbook and will receive a numerical grade.

### **Graphic Design 5**

Fifth grade students will build a foundation of graphic design. After being introduced to the basic functions of a Mac computer and the safe usage of the internet, the students produce imagery through project based learning, using design programs including Adobe Photoshop, a photo manipulation and digital painting program, and Adobe In Design (a design and layout program). Some photography and the use of existing photographs is incorporated into the class projects, and the students learn to manipulate digital images by using a variety of software applications. Project ideas include digital painting, art parody, self-portraits, manipulation of art history, logo and poster design, book making, advertising, textile design and packaging. The students are introduced to historical and modern day artists, and all projects reinforce the student's knowledge of the elements of art and principles of design. The overall goal of the graphics course is to enhance student's critical thinking skills and confidence by exposing them to the unlimited possibilities that digital art has to offer.

### **Graphic Design 6**

In the Graphic Arts course sixth grade students will build the foundations for graphic design. They are introduced to the basic functions of the Macintosh computer, the safety of the Internet, and working back and forth between programs. We use the programs Adobe Photoshop, Photobooth, Microsoft Word, and stock photography websites. Students use a range of programs, in order to create diverse projects involving poster designs, book covers, print advertisements, color masking, photo retouching, corporate identity and packaging design. Students are introduced to historical and modern day artists. In this program students learn the principles and elements of design. Students learn the importance of sketching their ideas on paper first before starting to design on the computer. Some projects will also be integrated with their visual arts class.

### **Graphic Design 7**

In the Graphic Arts course seventh grade students will build the foundations for graphic design. They are introduced to the basic functions of the Macintosh computer, the safety of the Internet, and working back and forth between programs. We use the programs Adobe Photoshop, Photobooth, Microsoft Word, and stock photography websites. Students use a range of programs, in order to create diverse projects involving poster designs, book covers, typography booklets, print advertisements, color masking, photo retouching, corporate identity and packaging design. Students are introduced to historical and modern day artists. In this program students learn the principles and elements of design. Students learn the importance of sketching their ideas on paper first before starting to design on the computer. Some projects will also be integrated with their visual arts class.

### **Graphic Design 8**

In the Graphic Arts course eighth grade students will enhance their graphic design skills. They will improve their Macintosh computer skills, knowledge of safely using the Internet, and working back and forth between programs. We use the programs Adobe Illustrator, Adobe Photoshop, Photobooth, Microsoft Word, and stock photography websites. Students use a range of programs, in order to create diverse projects involving poster designs, CD booklets, type and vector portraits, magazine covers, print advertisements, photo retouching, corporate identity and packaging design. Students are introduced to historical and modern day artists. In this



program students learn the principles and elements of design. Students learn the importance of sketching their ideas on paper first before starting to design on the computer. Some projects will also be integrated with their visual arts class.

### **Studio Art (Introductory)**

Art making integrates emotions and intellect. The creative problem solving experience is a model for real life and work situations. Art provides an alternative and generates satisfaction in a process creating personal growth. The art process at Saddle River is creative, intellectual, and technological. These students explore basic fine arts techniques: drawing in many media, painting, sculpture, color theory, composition, informal perspective, and the elements of art and design. Students have the opportunity to show their work in an all school art show at the end of the year.

### **Art Major**

This course is recommended for the serious art student. It aims to strengthen basic skills in drawing and painting while incorporating lessons in art history. Students will be expected to experiment and complete work in various two and three-dimensional media. This course concentrates on the mastery of new skills and the appreciation of previously learned material to the execution of more complex problems involving design, techniques, expression and creativity. Student work is evaluated individually on its own merit with some use of critiquing and portfolio review.

**Prerequisite:** Permission from the teacher and department chair is required to take this course.

### **Portfolio Art (Honors)**

This course will help serious high school students prepare a portfolio for college admission. Focus is on individuality. This course includes the development of ideas, drawing and painting techniques, composition, presentation and documentation. Each student will produce a 20-piece portfolio for admission to an art school. They will photograph their artwork to present slides where required. At least half of the portfolio should show drawing from life and include a variety of media and examples of original and creative problem solving. A well-filled sketchbook is also an important element. Supplemental courses are encouraged at local colleges and community art centers to enhance the student's body of work. Each fall a visit is scheduled on campus with art college representatives. The students will be able to interview and have their portfolios critiqued by the representatives.

**Prerequisite:** Permission from the teacher and department chair is required to take this course.

### **Graphic Design I: Grades 9-12**

In this course, students are introduced to the basics of graphic design. This course is suitable for students new to graphic arts or those who have taken classes previously. Students will learn how to successfully navigate industry applications such as Adobe Photoshop, Adobe Illustrator, and Adobe Indesign. They will face the challenge of real-world projects, which may include corporate identity, portraits, print advertisements, packaging design, multi-media imagery, editorial design, book design, as well as graphic pieces for school functions. They gain a basic foundation of the history of graphic design and create artworks in the style of well-known graphic designers. Students are introduced to the d.school model of the design thinking process as well as a collaborative design team approach to project management.

**Prerequisite:** Studio Art or 3 years of graphic and studio art in middle school and recommendation of the teacher and department head.

### **Graphic Design II Grades 9-12**

This course is an extension of Graphic Design I. Students continue to refine and conceptualize their ideas using the industry standards of Adobe Photoshop, Adobe Illustrator, and Adobe Indesign. They must be able to work independently and generate their own concepts for projects at this level. Graphics II furthers the focus on the critical role of typography in graphics arts. Using the d. school design thinking model, students create a

prototype for a product that solves a problem which they identify and then work on branding, 3D packaging design, and print advertisements. They will learn how to build upon their presentation skills by working with professionals when relevant, with an increased importance on meeting deadlines. Students continue to study layout design and vector art creation and projects may include design contests, digital illustration, packaging design, signage, advertising, type portrait, textile design, corporate identity, and product design. If time permits, the students will be taken on a field trip such as to a museum, design agency, animation company, or advertising firm.

**Prerequisite:** Graphic Design I and recommendation of the teacher and department head.

### **Graphic Design III Grades 10-12**

Graphic Design III is an advanced continuation of projects using Adobe Photoshop, Adobe Illustrator, Adobe InDesign, and time permitting, 3D printing for three-dimensional design. Students will continue to use the d.school design thinking model to solve problems and are expected to approach projects more confidently and independently using a “blue sky approach.” Students are given real-world experience through collaborative learning with professionals, and a curriculum rich in art history and interdisciplinary subject matter. They will learn how to work with a variety of real world experts and develop print and digital media which may include architectural perspectives, sections or plans; mood boards, logos, and animations for projects developed in conjunction with professionals or in response to issues that they identify. Students will continue to experience the importance of the design process from start-to-finish; concepts and sketches, design stage, and production, and will develop fluency in their ability to conceptualize and then materialize. Projects in this course will vary each year based on student interests and the availability of real world experts, though the skills and expectations of the course will remain the same. If time permits, the class will be taken on a field trip such as to a museum, design agency, animation company, or advertising firm.

**Prerequisite:** Graphic Design II and recommendation of the teacher and department head.

### **Graphic Design IV**

In Graphic Design IV students continue to use industry standards such as Adobe Illustrator, Photoshop, and InDesign to solve design problems and communicate visually using the d.school model of the design thinking process. Adobe applications are used in innovative ways and students are expected to demonstrate fluency as some projects require the use of more than one application in order to be successfully completed. Since Graphics IV is the culminating class of the Graphics program, students who take this course are expected to be highly motivated and independent workers. The class is run like a design firm, and students will collaborate with professionals in various fields to build their agency as designers. Students are expected to be able to articulate why a design works based on the elements and principles of art, and to give and receive constructive feedback in order to reiterate their work. Graphics IV are expected to be leaders in the graphics program by providing support to other students in our program. Students will be introduced to a variety of designs and designers to inspire their work, such as architectural perspectives and established graphic artists. Projects may include the creation of architectural perspectives, sections and plans; branding for both print and digital media, layout design, effective project presentation, digital animations, and signage for the needs of our community. This course culminates in an independent study project of the student’s choice which should communicate, in part, what the student felt was most meaningful during their design experience at our school.

**Prerequisite:** Graphic Arts III and recommendation of the teacher and department head.

### **Digital Photography**

Students are introduced to the fundamentals of digital photography through a blend of history, theory, hands-on work, and peer review. The course explores the history of photography, the basic features of modern DSLRs, the elements of composition, lighting and design, and the use of post-processing software to maximize visual impact. Class time will be used to learn and discuss the technical requirements of digital photography and to process images in the Adobe environment and to review and critique professional and student work.

### **Advanced Photography**

Photography II is open to students who have taken Photography I. The curriculum is designed to develop new skills using photography to tell a story, and students are encouraged to develop their own personal style. The coursework is organized with long term projects serving as a vehicle to acquire more advanced technical and artistic skills in practice. The course offers students opportunities to engage with different size film and digital cameras, get introduced to studio photography with the use of lighting equipment, and post-production techniques that support their artistic inclinations. Field trips are scheduled to advance the skills of approaching people and places as professional photographers. By the end of the year, students will emerge with their own professional portfolio and they will exhibit their best work at the annual school art show.

### **Videography/Broadcast Journalism**

This class is an introduction designed to provide students with artistic, creative and historical background in the fields of video, broadcasting, and film production through a theory based, hands-on approach. This course provides instruction and training in pre-production, production and post production phases of project development. Topics include writing scripts and storyboarding, technical aspects of the digital video camera, shots and composition, media literacy and non-linear editing. Students will work on single camera productions but will also have the opportunity to work in the production studio with multi-camera, live programming.

### **Advanced Videography**

Advanced Video Production is a hands-on course focusing on traditional production roles such as director, producer, camera operator, editor and screenwriter. Students will build on their knowledge and experience from Videography class. They will develop more sophisticated and complex productions incorporating new camera and post-production techniques.

Students will create pitches, storyboards, split scripts, production schedules and shot sheets in the pre-production phase. They will cast, shoot, direct and produce their various film projects and then edit, color correct, sound design and export their finished videos. Students will produce various projects of various lengths and topics depending on their interest. They may also plan and execute an online or digital film fest.

**Prerequisite:** Completion of Videography and Broadcast Journalism.

### **Advanced Videography Practicum**

This independent study opportunity enables students to earn academic credit while gaining relevant experience and an understanding of the video production and marketing industries. It will also contribute to their understanding of the job market and give them experience with collaboration, time management and mass communication. This independent study can also supplement academic learning in certain subjects.

Students may be able to build networks and make contacts for career development while gaining relevant experience. Their regular tasks should allow them to apply their broad skills and talents to benefit SRDS as well as further their own development. Students will gain a command of conception to distribution and analytics as well as intentional creation and deployment of video marketing.

Tasks may include: assisting with producing and editing videos for SRDS, writing copy for various marketing materials and producing their own independent video project from start to finish.

**Prerequisite:** Completion of Advanced Videography

### ***Department: Physical Education and Health and Counseling***

The general aim of physical education is to aid in the maximal development of each student's mental, emotional, physical, and social competencies through the media of selected physical activities. These activities, selected as to need and value, shall help each student find a pattern for living, which will serve them well today and in their

future. Furthermore to give each student a sense of enjoyment and appreciation of sport as it relates to their emotional health.

### **Health Grade 5**

The grade five Health course aims to introduce the students to a basic knowledge and understanding of the world of health as it pertains to this age group. The lessons attempt to remove any misconceptions and misinformation as well as to instruct the student in correct and appropriate subject matter.

### **Health Grade 6**

The grade six Health course aims to introduce the students to a basic knowledge and understanding of the world of health as it pertains to this age group. The lessons attempt to remove any misconceptions and misinformation as well as to instruct the student in correct and appropriate subject matter.

### **Health Grade 7**

The grade seven Health course aims to assist the student in developing a broader knowledge and understanding of the world of health as it pertains to this particular age group. The lessons attempt to expand the comprehension of the subject matter.

### **Health Grade 8**

The grade eight Health course aims to assist the student in developing a broader knowledge and understanding of the world of health as it pertains to this particular age group. The lessons attempt to expand the comprehension of the subject matter.

### **Health Grade 9**

The grade nine Health course aims to assist the student in developing a broader knowledge and understanding of the world of health as it pertains to this particular age group. The lessons attempt to expand the comprehension of the subject matter.

### **Health Grade 10**

The grade ten Health course aims to expand upon the student's knowledge, understanding and ability to make personal decisions. The goal is to allow the student to improve his/her knowledge and understanding in order to be able to make decisions based on factual, accurate information.

## ***Core Enrichment Courses***

### **Digital Citizenship, Grade 5**

Students studying Digital Citizenship explore the concepts and skills required to thrive in a constantly evolving technological landscape. The curriculum is based upon the standards developed by the International Society for Technology in Education. The year will be divided into 7 mini-units with students learning about the safe, responsible and ethical use of technology both inside and outside of school, designing and developing solutions to different problems with the technology available and understanding how technology can communicate information in various formats.

### **Digital Literacy, Grade 6**

Students in Digital Literacy explore the idea that there are various ways to learn new things, as well as different strategies to do so. Humans are constantly learning and relearning, designing and redesigning. Sixth graders are encouraged to explore their own learning process. Reflection and evaluation are important parts of this process.

Throughout the year, the sixth graders will design an independent project based on something they have always wanted to learn.

In conjunction with their Capstone project, they will practice research, communication, problem-solving and critical-thinking skills while exploring how technology and digital information can be utilized in meaningful ways.

After creating an elevator pitch and project plan, they use various resources and modes of data collection to get to work. They practice using different sources to gather information (book, website, interview). Through writing, photos and videos, students practice keeping track of their own progress. They keep a digital journal with video and photos to keep track of their progress/process. The final project includes creating a video tutorial to teach others what they have learned. They present their final project and tutorial video in the Spring.

### **Digital Fluency, Grade 7**

Students studying Digital Fluency will continue to develop the skills required to thrive in a constantly evolving technology landscape, building on work they started in 5th grade, combined with the design thinking and project management skills they developed in 6th grade. The curriculum is based upon the standards developed by the International Society for Technology in Education. The year will be divided into short units with students implementing the safe, responsible and ethical use of technology, designing and developing solutions to different problems with available technology and developing understanding of how technology can communicate information in various formats.

In each unit the students will be given a problem to solve or scenario to explore using available technology. They will work independently or in a team to design and develop an outcome, which they will share with their classmates.

### **Research and Writing**

*Mandatory full-credit major course for 9th grade*

This course builds the skills necessary for writing a long-form research paper. Topics include research questions, keyword research, organization, thesis writing, bibliographic style, and the revision process from rough draft to final paper. Students will be guided through the entire process from initial topic to final draft in the first trimester, and given a bit more independence in each subsequent term. In all, every student will complete three full-length research papers by the end of the year, and they will be prepared with all the skills and practice needed to tackle any future research papers.

### **Sophomore Seminar**

The Purpose of the Sophomore Seminar is to provide all Sophomores with the necessary skills and support to put forth their best academic work while at SRDS. Additionally, the program seeks to provide the tools for those Sophomores who are developmentally ready to engage with the college process. Using resources like YouScience and Coursera, and through frequent written reflection, students can better understand how best they learn and what they might be passionate about. Through intentional instruction of introductory Cognitive Learning Theory, and deliberate practice of thinking about their own thinking, students will better understand themselves as learners, and develop a greater sense of self-advocacy.

### **College Counseling Workshop**

CCW is designed for juniors and seniors in order to help facilitate the many steps of the college process. Students meet once per week during a designated open period to meet with the college counselor and work on interviewing skills, essay writing, and the college applications.

