



Course of Study

2019-20

GEORGETOWN DAY SCHOOL MISSION STATEMENT

Georgetown Day School honors the integrity and worth of each individual within a diverse school community. GDS is dedicated to providing a supportive educational atmosphere in which teachers challenge the intellectual, creative, and physical abilities of our students and foster strength of character and concern for others. From the earliest grades, we encourage our students to wonder, to inquire, and to be self-reliant, laying the foundation for a lifelong love of learning.

TABLE OF CONTENTS

LOWER/MIDDLE SCHOOL

Curriculum Overview	2
Pre-Kindergarten/Kindergarten	8
First Grade	11
Second Grade	14
Third Grade	16
Fourth Grade	20
Fifth Grade	24
Sixth Grade	28
Seventh Grade	32
Eighth Grade	37

HIGH SCHOOL

Curriculum Overview	42
Arts: Performing	44
Arts: Studio	47
Community Service	49
English.....	50
History and Social Sciences	52
Innovation and Technology	56
Interdisciplinary	58
Mathematics	59
Physical Education	63
Science	64
World Languages	67

LOWER/MIDDLE SCHOOL CURRICULUM OVERVIEW

Georgetown Day School is well known for its challenging and innovative curriculum. From pre-kindergarten on, teachers seek to stimulate, challenge, and inspire students to explore the world around them and discover their place in it. This section of the Course of Study details the PK-8 curriculum.

THE ARTS

The arts program is an essential part of the Georgetown Day School Lower/Middle School curriculum, offering students an in-depth study of drama, dance, music, and the visual arts. The program provides a variety of opportunities for students to develop their interests, skills, and appreciation of the arts.

ARTS CORE CURRICULUM

Drama

In pre-kindergarten and kindergarten, dramatic play and appropriate dramatic activities are a part of the daily curriculum. Students in first through eighth grades take drama as a separate course. The main goals of the drama program are to allow the students to develop a sense of themselves as creative and expressive individuals with responsibilities to a larger community, to be comfortable with risk-taking, to learn movement and drama skills, and to develop critical and creative thinking skills. Over the course of their stay in the Lower/Middle School, students enjoy a variety of dramatic performing opportunities.

Music

Music is an important part of every child's life at GDS. We seek to create a foundation for a lifelong love of music and to foster active audiences, accomplished performers, and musically literate students. In classes, assemblies, and informal get-togethers, children experience the joy and beauty of musical expression. Students experience the different elements of music through movement, singing, and playing instruments, gaining the foundation necessary for an intellectual understanding of music. Faculty members use several instructional techniques including Orff and Kodaly. Age-appropriate technology, including Noteflight and Google Apps, are incorporated throughout the various curricula.

Visual Arts

Designed to develop the student's ability to approach creative experiences with self-confidence, the visual arts program introduces students to a broad assortment of media and techniques. Concepts are presented to make students more sensitive to the aesthetic qualities of their environment and to provide a rich source of experience from which they can draw. Teachers work hard to maintain a balance between providing formal instruction and giving students opportunities for free, creative expression. A consistent approach to working in the studio, including the proper use of materials and instruction in specific techniques, ensures that all students gain a common frame of reference. All students work with paints, a wide range of drawing materials, found objects, clay, papier-mâché, and printmaking materials.

ARTS ENRICHMENT CURRICULUM

Band

Beginning in fourth grade, all interested students may take wind and percussion instrument instruction once a week for 45 minutes. In January, beginner's band rehearsals begin and are held once a week. The fourth graders perform in May. Fifth and sixth graders have 45-minute lessons once a week. Seventh and eighth grade students meet twice a week, by grade, for 45 minutes. The Middle School band, which includes sixth through eighth grades, rehearses once a week for 50 minutes and performs at assemblies and for the community.

Chorus

The chorus program is offered fourth grade through eighth grade. During weekly rehearsals for this elective, choral techniques, part singing, and age-appropriate repertoire are presented and developed. Choruses perform at major assemblies and festivals.



Dance

The Lower/Middle School dance program emphasizes the creative process, personal expression, and performance through movement. Dance is introduced to our students in PK/K and continues through the Middle School as a core part of the arts curriculum. Middle School students experience dance history and dance literacy in Core Dance classes as well as having the option of being in dance enrichment classes that focus on modern/contemporary dance technique, improvisation, choreography, and performance. Middle School dancers perform in two Dance Showcases and dance assemblies for their peers.

Middle School Visual Arts Enrichments

In Arts Enrichments, students have an opportunity to explore a wide range of projects using a variety of materials. Enrichment classes are more akin to a studio atmosphere; students begin each project with strong technical direction and guidance and then become more self-directed as they bring their projects to completion.

SERVICE AND SERVICE LEARNING

Service learning is an important, ongoing component of every Lower and Middle School student's educational experience. Teachers prepare students through discussions of the societal issues they face and then provide them with tools to reflect regularly on their experiences. Lower and Middle School students work alongside their teachers and advisors on projects that teach them about some of society's most pressing issues.

HEALTH AND WELLNESS

The mission of health education at Georgetown Day School is to foster and encourage health and wellness in the GDS community. Health and wellness must begin with a positive sense of self and responsible decision-making skills. A positive sense of self requires a safe and comfortable learning environment. This requires a commitment to diversity and the belief in the worth of each individual. As such, the GDS health curriculum emphasizes the development of social, cognitive, and physical skills.

The foundation of this curriculum is grounded in giving students the information and resources needed to make responsible decisions with respect to personal health and fitness, family life, nutrition, disease prevention and control, growth and development, sexuality, mental/social/emotional

health, safety and injury prevention, the prevention of substance abuse, community health issues, and environmental health. The themes of responsible decision-making, respect for the worth and integrity of each individual, respect for and understanding of the diverse populations within our community, and consumer awareness run consistently throughout the program.

The Lower/Middle School health education program teaches students that their physical, emotional, and social well being are integrally related. A primary goal of the curriculum is to instill in children the necessity of being responsible individuals regarding all aspects of their health and behavior. Students learn how to make responsible, healthy choices in their lives.

All students have an opportunity to work with the school counselors through prevention and intervention efforts. Classes participate in lessons monthly or more often as needed, and students often have lunch with the counselor for less formal conversations. In addition, students, families, and/or teachers can seek the counselor for assistance with personal concerns or social problem solving.

When students complete the health education program at GDS, they should have acquired a set of values that support the greatest chances of enjoying a lifetime of health, positive self-esteem, and respect for others.

LANGUAGE ARTS/ENGLISH

Throughout the Lower and Middle School, teachers base their writing instruction on the guidelines established by the National Writing Project, following years of research into the process of writing by Donald Graves. Students use a collaborative process and follow the stages of pre-writing, drafting, conferring, editing, and publishing. This approach enhances enjoyment and proficiency in writing. Students publish pieces of their favorite writings both individually and/or collectively. The mechanics of writing—spelling, grammar, and punctuation—are taught both within the framework of the writing program and separately, as additional work and instruction are needed.

In Lower School language arts, students become fluent readers and writers, as well as effective communicators and listeners across multiple human perspectives, using different mediums for varied purposes. The language arts curriculum equips students with skills necessary to think critically and work



collaboratively in order to live healthy, happy, productive and responsible lives.

As reading proficiency increases in Middle School, the curriculum incorporates books selected both for literary value and to expose students to a variety of authors and points of view. Students leave the Middle School with a solid literary base, strong writing skills, and the ability to discuss a wide range of ideas.

LIBRARY

The PK-12 library programs' goal is to develop ethical, knowledgeable 21st Century scholars able to find and evaluate and use credible sources throughout their lives. The libraries of Georgetown Day, in both the Lower/Middle and the High School, are central to the school's mission. A combined book collection of more than 30,000 volumes and 37 databases, covering all aspects of the curriculum, provides research and reference for the GDS community.

Emily Style, in her essay, "Curriculum as Window and Mirror," advocates for "curriculum to function both as window and as mirror, in order to reflect and reveal most accurately both a multicultural [i.e., diverse] world and the student herself or himself." The LMS librarians strive to create a collection and a space where this is possible. Open throughout the school day, the library welcomes regularly scheduled weekly class visits and independent study.

Kindergartners through fifth graders practice skills of information literacy and learn how to select books and articles (both electronic and print) that suit their needs. Middle School students receive instruction in efficient searching and organizing of information, how to avoid plagiarism, and creating bibliographies. In addition, professional and parenting titles are available for the community. "Destiny," the online catalog, as well as encyclopedias, databases, and teacher-approved websites for projects may be accessed from home through the GDS website (password-protected).

MATH

The PK-8th grade curriculum actively involves children in "doing" mathematics. They explore and discuss ideas; justify procedures; use, describe, and represent data; investigate and solve problems; construct algorithms; develop strategies; and predict results. A variety of activities provide opportunities for tactile, auditory, and visual learning. With an eye to developing

the children's mathematical thinking and reasoning abilities, teachers stress the importance of communicating ideas, developing a repertoire of strategies for problem-solving, and gaining flexibility in working with mathematical ideas. Students learn to select strategies and techniques, recognize familiar mathematical structures in unfamiliar settings, detect patterns, and analyze data. To aid in the learning process, students use manipulatives and concrete materials, write about mathematics, and use calculators and computer software.

Lower School Math

In Lower School, students work individually and collaboratively to tackle complex problems, enabling them to use mathematics in a meaningful and relevant way, to communicate clearly and powerfully, and to shape the communities and the world in which they live. Teachers provide an environment that develops and inspires mathematical, critical, and socially minded thinking. Math concepts are regularly applied to real-world situations and other curricular areas. Individual math topics are taught as an integrated whole and the connections among them are prominently featured.

First In Math[®], an online program used in grades 1-5 both in school and at home, strengthens mental computation facility while engaging students in problem-solving and critical-thinking activities. Other software programs, including FASTmath, IXL, and Problem of the Week supplement our classroom work by helping to build fact fluency and problem-solving skills, as well as to reinforce conceptual understanding.

Middle School Math

Students in middle school math classes are challenged to think critically about the mathematical process. They are encouraged to justify their reasoning in order to build a deeper understanding of the mathematical concepts and to build their capacity to problem solve creatively. Course content focuses on developing students' conceptual understanding, procedural fluency, and problem-solving strategies to deepen learning. At each grade level, students are encouraged to extend their understanding, moving from concrete tasks to more abstract problems. The goal is to engage students in a variety of experiences and activities that will prepare them for more complex topics in math.



WORLD LANGUAGES

Language study begins at GDS in third grade when students may elect Mandarin Chinese, French, or Spanish. Once selecting a language, students commit themselves to the selected language through sixth grade. Students in seventh grade may continue with the language they started in third grade through eighth grade or switch to Latin.

The successful study of a language involves the acquisition of listening, speaking, reading, and writing skills, in that order. Progress is as natural as possible, rooted in the premise that students will learn to think in the language rather than translating from English. Students are encouraged to speak in the target language, and classes are mainly conducted in that language to develop listening comprehension. Conversational ease develops through readings and directed dialogues until students are capable of comfortable self-expression and some creative writing. Educational trips, dramatic activities, music, games, and films supplement classes. The curriculum includes study of the geography, culture, and history of relevant countries.

PHYSICAL EDUCATION/ATHLETICS

GDS believes strongly that physical education is an integral part of a child's development. Students learn the value of physical activity while participating in a safe, positive, inclusive, and cooperative class environment. They move through a progression of individual and class challenges to enhance their fitness, develop their skills, and improve their confidence. Students are empowered and encouraged to make good decisions about their physical, cognitive, social, and emotional health, leading them to an active, productive, and fulfilling life.

An array of facilities, including a full-size gymnasium, wrestling room, outdoor sport court, turf playing field, and an elementary outdoor play area, offer exceptional space for curricular and cross-curricular physical activities.

In grades PK-2, movement education is the primary vehicle used to develop locomotor and nonlocomotor skills, spatial awareness, body control, and the ability to manipulate objects. Students are actively engaged in class, working both independently and cooperatively. In grades 3-6, the program develops students' fitness skills through goal-oriented activities. Sport-specific skills are also introduced for both individual and team sports, including modified competitive opportunities. Emphasis is placed on participation, skill acquisition, strategic thinking, team play, and knowledge of rules. Gymnastics, fitness,

and dance round out the curriculum in all grades. Self-esteem, sports citizenship, safety, and fun are key objectives in each component of the curriculum. Sixth graders culminate each unit with an intramural program designed to prepare them for the seventh and eighth grade interscholastic athletic program.

The primary focus of the Middle School athletic program is to provide all seventh and eighth grade students with a variety of athletic experiences. The program includes team and individual sports and lifetime fitness activities. Competitive play further develops sports skills, strategy, and team cohesion. This activity continues to build self-esteem and sports citizenship and prepares students with the skill and desire to continue athletics in high school.

SCIENCE

With seven science classrooms and designated science teachers at every grade level, the Lower/Middle School science program seeks to ground students in life, Earth, and physical sciences so essential to comprehending the world around them. The program uses a wide variety of activities and materials that stimulate scientific awareness in order to develop conceptual understanding through concrete experiences and scientific experiments.

Lower School Science

In grades PK-5, students develop a love of science and science learning while asking and answering scientific questions creatively, collaboratively, and independently. Using a variety of scientific processes, skills, and tools, they employ their knowledge to address both individual and global issues.

Middle School Science

The Middle School program increases emphasis on laboratory work and applying the scientific method. Students are given opportunities to design experiments and engineering projects in order to deepen their understanding of science content.

SOCIAL STUDIES/HISTORY

The social studies program strives to develop the critical thinking skills necessary in all students to deal effectively with personal, social, and political responsibilities. The social studies curriculum provides students with knowledge of historical events as well as a sense of the passage of time, the nature of change, and the common bonds human beings share. Children learn and employ tools for understanding social science fundamentals such as mapping, geography, and research.



Lower School Social Studies/History

In Lower School, students develop a meaningful understanding of, and healthy appreciation for, the world, from both contemporary and historical perspectives; view history through multiple lenses in order to think critically; and develop strength of character and empathy to reflect upon and advocate for social justice in the world.

Middle School Social Studies/History

Middle School history classes are designed to help young minds learn and practice the skills used to study the past. Our students learn that history is a process where actions have consequences and themes can be perceived and traced over time. From the ages of 11 to 14, students are increasingly able to think analytically, evaluate sources, and engage in research. The curriculum takes advantage of this developmental leap to stimulate the students' understanding of history as a dynamic interplay of forces.

TECHNOLOGY

Technology is fully integrated into the academic curriculum at the Lower/Middle School. Faculty members use technology tools with their students, and training and support are offered on a continuing basis. The GDS network links two campuses, computer classrooms, science labs, traditional classrooms, and the School libraries. In the Lower/Middle School, four technology classrooms, four mobile laptop labs, Interactive Whiteboards, classroom computers, and iPads enable students to work in small collaborative groups, as a class, or individually. LMS technology classrooms are located close to clusters of grade-level rooms. The LMS multimedia center offers projection equipment, a satellite TV connection, digital cameras, digital video cameras, and video-editing software.

Technology and library faculty members support information-based learning and collaborate closely. Students have access to the online catalog and five web-based encyclopedias as well as article and magazine databases. Many library web resources are available to students from home. Teachers use technology tools to expand educational opportunities, helping students complete research projects, conduct experiments, collect and evaluate data, solve math problems, develop multimedia presentations, and write, edit, and publish work electronically.

Throughout the Lower/Middle School, students develop a solid grounding in technology ethics. The Acceptable Use Policy, signed annually by GDS students, details the rights and responsibilities of individuals who participate in the

School's virtual community. The Lower/Middle School community participates in ongoing technology ethics discussions, which help students understand the importance of copyright protection, best practice of internet sources, care for equipment, respect for the work of others, and personal integrity. By the time students complete the eighth grade, they are confident and competent technology users.

RESOURCES

Learning specialists and counselors work to facilitate the academic achievement and emotional wellness of students throughout the grades.

The work of learning specialists in the Lower/Middle School varies by grade. In Lower School, all students are screened at the start of the academic year by learning specialists and teachers to establish a baseline for reading. The results of these screenings are carefully analyzed and used to ensure appropriate instruction and support. Additional progress checks are conducted throughout the year. In the lower grades learning specialists primarily focus on systematic reading and writing instruction. Moving through the grades, the learning specialist becomes involved more broadly, supporting students' academic needs in partnership with teachers. When necessary, the learning specialist suggests and implements learning strategies or recommends further evaluation. The learning specialist monitors the use of student accommodations in the classroom. All learning specialists collaborate with GDS faculty, families, and outside professionals as necessary to support the growth of our students.

The Lower and Middle School counselors provide both direct and indirect support to students in classrooms and families. They also work with faculty to support existing health and wellness programs. When necessary, the counselors provide short-term support to individual students.

SPECIAL PROGRAMS

Assemblies

Student assemblies feature festival celebrations and dramatic productions. Guest presentations include storytelling, Library Theater, ballet and modern dancing, opera, puppetry, juggling, and musical performances. We also hold monthly community gatherings to catch up with one another and assemblies that highlight our cultural diversity.



Book Fair

During the spring Book Fair, our community engages in literacy activities around the school, including an event where students' votes determine which books in our library deserve "Hopper Awards." Our librarians engage students in a process of identifying criteria for this award and in reading nominated books leading up to the Book Fair. Students may also shop from a wide selection of books and reading activities. The Fair is a favorite time for parents to volunteer their services and become better acquainted with GDS and its reading activities.

Drama Productions

Extracurricular drama production opportunities in the Middle School include the fall musical and the Community Production, a student-written show. Students also have the opportunity to be involved in curricular performances, which can include musical theater reviews, improvisational comedy, dramatic scenes, and film productions.

Festivals

School-wide festivals have a long tradition at GDS. The founders of the School felt that remembering universal messages at festival times was an effective way for students in our diverse population to share cultural traditions and draw the community together.

There are five festivals during the year at GDS. Thanksgiving Harvest is our uniquely American holiday in which the theme is gratitude. At Christmas we celebrate peace and goodwill. The message for Martin Luther King, Jr., Day is justice. In the spring, Passover's message is freedom. The Lower School Free-to-Be-Me Assembly and the Middle School Gay Pride Assembly in late spring highlight equality and inclusion. Festivals take many forms, but are always special for students, teachers, and parents.

OFF-CAMPUS LEARNING OPPORTUNITIES

Georgetown Day School teachers use a rich array of exhibits, programs, tours, and living experiences. The School's location in the nation's capital makes many historic sites, museums, galleries, animal habitats, and other places of interest readily accessible. The use of resources is not limited to destinations and artifacts; the program also benefits from the wealth of expertise available. Particular use is made of the many branches of the Smithsonian Institution. Museum staff members work with the students during museum visits, and museum docents

come to the classrooms to provide background for those visits.

Complementing the strengths of the School's urban programs are grade-level trips to outdoor educational sites. Lower School trips include: Homestead Farm, Camp Letts, Camp Pecometh, Turkey Run Farm, Prince William Forest, and South Mountain. Middle School trips include: 4H-Virginia, Chesapeake Bay, and Camp Arrowhead.



PRE-KINDERGARTEN/ KINDERGARTEN

Each child's learning and development are at the core of the pre-kindergarten/kindergarten curriculum. Its goals are to help children feel comfortable with themselves, their teachers, and their peers in and outside the classroom; develop a sense of their own competence and self-worth and learn to feel positive about themselves as independent people in the world away from home; learn to effectively and happily interact with others; and learn to resolve conflicts and find cooperative solutions. Teachers work collaboratively to ensure that students engage in meaningful, authentic learning opportunities—primarily through a play-based approach—that foster these social and academic goals.

THE ARTS

Dance (once a week)

PK/K students experience dance through perceiving, response, and performing movement. Through a series of games, challenges, and introductions to different dance forms, the PK/K dance curriculum assists students' social/emotional growth and space awareness development. Risk-taking and developing an understanding of what makes us unique are the underpinnings of the PK/K dance curriculum.

Music (twice a week)

The goal of the music program is to introduce and reinforce basic musical concepts through singing, movement, dancing, playing instruments, and structured listening. The concepts include melody, rhythm, dynamics, and tempo.

Visual Arts (daily, in homerooms)

Art projects are a part of each week's activities; a wide variety of art materials are available during free-choice times. Art is fully integrated into child- and teacher-initiated language arts, social studies, science, and math projects. Experiences are also planned for the sheer joy and excitement of self-expression through art. Students learn techniques such as painting, drawing, and making objects out of clay, boxes, and papier-mâché.

COMMUNITY SERVICE

Each week, PK/K students make cheese sandwiches that are delivered by parent volunteers to Martha's Table, a local service organization for the homeless. By keeping track of how many

sandwiches are made, students know how many people they are feeding throughout the year. Kindergarten students may also visit with seniors at a local retirement home and collect supplies for people experiencing homelessness.

HEALTH AND WELLNESS

Childhood is a unique and valuable stage in the life cycle. Our paramount responsibility is to provide a safe, healthy, nurturing, and responsive setting for children. We support children's development by cherishing and affirming individual differences, helping them learn to live and work cooperatively, and promoting self-esteem.

The PK/K daily schedule provides a balance of open-ended and structured time in which our health curriculum naturally occurs. Group meetings, snack/sharing, lunch, concept time, discussion times, outside time, and interactive play present natural opportunities to learn about nutrition, family lifestyles, growth, and environmental health. Conflict resolution is also an important element of learning. Conflicts are a natural consequence of group living and learning. Learning the steps of conflict resolution is as much a function of the curriculum as is discovering the life cycle of a butterfly or chick. Our health curriculum aims at creating and maintaining a setting that fosters children's social, emotional, intellectual, and physical development and that respects their dignity and their contributions in our community.

The Lower School school counselor works with all PK/K classes and regularly provides lessons to help students better understand personal feelings and engage in social problem-solving.

LANGUAGE ARTS (DAILY)

Our youngest students receive a rich variety of first-hand experiences and enjoy multiple ways to express their feelings and ideas through language. Through creative play, classroom materials, scientific observations and discoveries, arts and crafts projects, friends and fourth-grade buddies, cooking experiences, assemblies, school-wide projects (like sharing how their families celebrate holidays at assemblies), special family projects, and field trips, the PK/K program offers a wealth of meaningful experiences.

Children discuss, draw pictures, write, and read to capture and communicate their experiences to diverse audiences. They



are encouraged to communicate effectively by speaking in front of the class, dramatizing stories, reciting and creating poems, singing songs, asking questions, and sharing personal experiences aloud.

Every child is an author, and each child keeps a journal. Depending on their developmental level, children draw and dictate their words to a teacher or write using “inventive” or “developmental” (phonetic) spelling. Teachers introduce alphabet letters and sounds to children through memorable concrete materials and experiences. These experiences may include art, science, math, social studies, music, or movement.

Language arts is often integrated with other subject areas. Time is invested in developing the gross and fine motor skills on which reading and writing depend. Children learn how to form letters correctly using pencils as they begin to experience writing as a process. When they enter PK/K, many children are just learning letter names and sounds, and some are emergent readers; a few children may read with fluency. A variety of instructional methods, games, and activities introduce phonemic awareness.

Through exposure to outstanding children’s literature, children have many opportunities on a daily basis to increase their knowledge of concepts of literacy through print, story sequence, and illustrations. They learn that words have meaning, that there is a direct correspondence between the written and spoken word, and that print flows from left to right and top to bottom. They learn to predict the outcomes of stories, begin to acquire a sight vocabulary, become familiar with sentence structure, make visual and auditory discriminations about letters, and become familiar with punctuation marks. In addition, our print-rich classrooms provide opportunities for the children to read a wide variety of printed matter, including their picture job charts, daily schedules, morning message, Big Books, easy-to-read books, and other library books. All of this reading occurs in the PK/K classrooms every day, but children at GDS are not placed into formal reading groups until first grade. One of the main goals in PK/K is to motivate children to learn to read and to instill in them a love of books. We target phonological skills using a variety of instructional methods, games, and activities.

LIBRARY (ONE PERIOD A WEEK IN HALF GROUPS)

Through weekly visits, PK/K students are introduced to story-time and book discussions, which are interwoven with the classroom curriculum. In addition, students learn the difference between fiction and non-fiction books and explore different genres. Students learn to choose, check out, and to be responsible for returning their books. The students acquire and practice appropriate library procedures.

MATH (DAILY)

The PK/K classroom and daily routine are designed so that children develop math concepts and skills. Children discover and explore mathematical concepts both on their own and through teacher-directed lessons. Concrete materials are carefully chosen and logically arranged to teach math concepts so that through play and clean-up, children develop the ability to classify and sort, count, compare, and match using one-to-one correspondence. Throughout the day, math is highlighted, demonstrating the vitally important role that it plays in the students’ lives. The daily routine includes asking children to figure out the different periods in their daily schedule, the day of the week, the day of the month, the number of children present and absent, and the number of days we have been in school. Counting opportunities abound. Sequence and order are reinforced as each arts and crafts project is introduced through review of what to do first, second, next, and last. Every attempt is made to integrate math into all subject areas.

Children are engaged in two or three additional formal teacher-directed lessons each week followed by sufficient time to explore and practice math concepts through selected manipulative materials. Basic concepts and skill practice include work with the ordering of numbers, numerical symbols, one-to-one correspondence, classifying, sorting, measuring, data collection and graphing, pattern discrimination and naming, and the numbers 1–100.

Work with identifying, naming, and comparing attributes associated with shape, size, and color further strengthens concept formation. Collecting, joining, and separating sets of objects while introducing such terms as “greater than,” “less than,” or “equal to” reinforces correct use of terminology and symbols. Specific work with blocks, sand, and water expand student knowledge of three-dimensional space and symmetry. A math specialist works with small groups of children once a week to give all students an opportunity to explore concepts in



greater depth while developing the language of mathematics through enhanced work with manipulatives. The specialist may reinforce concepts, introduce additional concepts, or evaluate the children's math strengths. It is a busy year where learning and playing intertwine.

PHYSICAL EDUCATION (FOUR PERIODS PER WEEK)

In PK/K, students develop basic body control, explore concepts of rhythm and space, and learn how to use balls, implements, and other equipment. Classes emphasize working with partners and classmates and involvement in basic patterns of play and games. Students also learn the importance of following directions. By year's end children should take joy and satisfaction in physical activity and their developing physical skills and strength.

SCIENCE (DAILY ONGOING SCIENCE PROJECTS)

In PK/K, there are daily opportunities for children to observe, to ask scientific questions, to experiment, to note results, and to refine their thinking. Whether observing that cooking ingredients change with heat or constructing a ramp in the block area, for example, children explore scientific principles in their play. Teachers encourage this thinking by providing materials, plants, and animals in the classroom, by encouraging children to display their own "museum" collections, and by introducing planned units throughout the year such as planets, birds, and seeds. In the classroom, chicks and ducks hatch, seeds sprout, and caterpillars metamorphose into butterflies.

Once a week, a science specialist leads hands-on activities with students as they learn to think like scientists and develop observational skills. Students develop hypotheses, conduct experiments, collect and record data, and reach scientific conclusions.

SOCIAL STUDIES (DAILY)

Social Studies centers around the question: Who am I? The topic children this age are most interested in is, appropriately, themselves. What do I look like? What foods do I like best? Who is in my family? What can I do? One major goal in PK/K social studies is to build each child's positive self-image and to help children learn what is unique and special about them, what they share in common, and how to function as part of a group. Who is in my family, in my school,

in my community, and in my world? In order to answer these questions, we plan special activities and field trips to broaden their knowledge of the roles people play in the world of work and provide ideas for creative dramatic play in the classroom. The children also explore a variety of cultures and celebrate numerous holidays and customs, based in part on the diverse population of their classrooms. They celebrate the lives of diverse individuals who have made lasting contributions to our world. In addition to these special activities, teachers work intentionally to integrate affirmations of difference among children in our community and world.

TECHNOLOGY

Technology in PK/K is designed to be used as a hands-on tool to enhance students' learning of reading, writing, math, science and the everyday world. There are iPads in all three classrooms, for both individual and group work. Each iPad has apps that support Handwriting Without Tears, Everyday Math, and art. Both students and teachers use Interactive Whiteboards, mounted in every room, for Morning Meeting, attendance, and to support both visual and auditory learners.



FIRST GRADE

THE ARTS

Dance (one period a week)

First grade students experience creative movement through a series of movement explorations, as an individual, with a partner, or in a group. Students develop their spatial awareness, movement articulation, and physical expression through a variety of movement improvisations. Risk-taking and developing an understanding of what makes us unique are the underpinnings of the first grade dance curriculum.

Music (two periods a week)

The first graders become more confident and competent in their continued exploration of the elements of music. While keeping a steady beat when playing xylophones and rhythm instruments, the students also recognize rhythmic notation. Singing in tune, singing longer songs, and singing while playing games further reinforce the understanding of the elements of music.

Visual Arts (one period a week, plus an extra period on alternate weeks)

In first grade, children are introduced to the art-room experience. Emphasis is placed on the recognition and use of line, shape, color, and texture. Students learn techniques involved in painting, drawing, and collage. The three-dimensional skills learned include clay modeling, pinch-pot construction, and wood assemblage.

COMMUNITY SERVICE

As a natural extension to their social studies curriculum, first grade students partner with We Are Family, an advocacy and outreach network serving DC-area seniors. Students engage in hands-on service by helping bag groceries that go out for monthly deliveries and learning how their work will help others. Many cartons of donated foods fill one room of the church in which the students provide assistance. Some distribute cans of vegetables, beans, fruit, or soup to their classmates toting shopping bags, while others add pasta, rice, potatoes, and other staples until the bags are full. Each time, students marvel at the pile of 500 bags they packed for needy seniors!

HEALTH AND WELLNESS

The first grade health curriculum is implemented in the classroom as well as in science and in physical education. Students will develop personal health skills such as healthy eating habits, disease prevention, physical fitness, and exercise. Developing effective communication skills, wise decision-making, understanding bullying, and building friendships are an integral part of the first grade classroom. Students also learn to care for the environment. At least monthly, the school counselor provides class lessons to support students' growth with social problem solving and positive, yet direct communication.

LANGUAGE ARTS

The main thrust of the first grade language arts program is to teach children to read independently and confidently in a manner consistent with their skill and developmental levels. Phonics, sight-word recognition, fluency, and comprehension techniques are all taught using a Balanced Literacy approach (a combination of Whole Language and Skills-based approaches).

Some children are in the first stages of phonics and sight-word vocabulary building while others read fluently. During the first part of the language arts block, the class reads orally from carefully selected poetry and "big books" (some of which have been composed by the class), in order to learn or reinforce specific skills. Small reading groups further reinforce these skills and focus on the needs appropriate to the phonetics and comprehension mastery level of each member.

Oral and kinesthetic methods characterized by active participation are an integral part of small-group instruction as is fostering an enjoyment of reading. Children read aloud to refine reading fluency skills and build confidence to become independent readers. They discuss the vocabulary and content of the reading selections drawn from materials such as Rigby Publications, The Wright Group, Language Experience stories, and a variety of children's literature trade books. These sources span a wide range of genres and difficulty that reflect the unique interests and character of first-grade readers. A large selection of books and tapes in the classroom encourage reading competence and enjoyment.



An integral part of the language arts block is journal writing and Writing Workshop. During these activities, students learn to develop and present their ideas in writing. Writing Workshop also entails giving and taking suggestions for story lines, enhancing the content with detailed and appropriate illustrations, incorporating changes into written pieces, and creating writers who delight in publishing and sharing their own stories.

Handwriting is taught during a specific period and gradually becomes integrated into other subject areas. Using the Handwriting Without Tears program, students learn letter formation using the midline and baseline to guide them.

LIBRARY (ONE PERIOD PER WEEK)

Each week the first graders listen to stories about families, interpersonal relationships, and books with themes about social justice and advocacy. Students begin learning research skills by using library call numbers to find their books and to learn how to evaluate an information source's authority and reliability. Also, they learn how to cite a source by using the title and author of the book. They continue to use the book selection skills learned in kindergarten by choosing and checking out books.

MATH (FIVE PERIODS PER WEEK)

The first grade math program incorporates games, activities, and manipulatives for hands-on math. The curriculum introduces a variety of math concepts and repeats them several times throughout the year so that students have many opportunities to practice and master math skills.

First grade math continues and expands upon the use of math for establishing the daily routines associated with maintaining and announcing the daily schedule and calendar. For example, students use our interactive whiteboards to model the number of how many days we have been in school using money, tally marks, place value sticks and base-10 blocks.

Continued work with manipulatives strengthens concepts of whole numbers, patterns, and counting by 1s, 2s, 3s, 4s, 5s, 10s, and 100s and introduces work with fractions. Children make greater use of the number line, place-value charts, the hundreds chart, and base ten blocks to develop an understanding of our number system. Addition, subtraction,

multiplication, and division concepts as well as ideas of equality and inequality are explored through the regular use of manipulatives. Mastery of addition and subtraction fact families through 10 is desired and supported through practice. To strengthen recall of addition and subtraction facts, the FASTmath online software system is introduced and incorporated with classroom work and can be accessed from home.

Classification and sorting of attribute blocks and other objects is the groundwork for algebraic reasoning. Exploration with pattern blocks and tangram puzzles, constructing with polygons and straws, and observing a variety of models strengthens awareness of attributes and characteristics of both 2-D and 3-D geometric shapes. Children learn to measure length, temperature, and weight, as well as gather, record, graph, and interpret data. Through oral and written problem-solving exercises, students demonstrate their understanding of these key concepts.

An additional math instructor works with children in small groups twice a week, giving all children an opportunity to explore concepts in greater depth while developing the language of mathematics through enhanced work with manipulative materials.

PHYSICAL EDUCATION (FOUR PERIODS PER WEEK)

P.E. classes in first grade help students develop joy and satisfaction when performing basic forms of movement and body control, a sense of freedom to explore rhythm and space in gymnastics and dance, and greater control and accuracy with balls, implements, and other equipment. Students are taught in both single and team-teaching situations, and classes are designed for students to work individually, as well as cooperatively in partners or small groups. Teachers help students understand basic game strategies and how to progress to more complex tasks during activities.

SCIENCE (TWO PERIODS A WEEK IN HALF GROUPS)

Located in the Lower School science lab and taught by a designated science teacher, the science program in the first grade responds to a child's natural curiosity and interest in the physical world. Children begin to learn the skills associated



with science such as critical thinking and making observations.

To increase their understanding of the world around them, students perform a number of experiments with magnets to learn about magnetic and other invisible forces and to test different magnets for strength. The students continue to explore physics with a building technology unit using Kapla building sets, learning about building materials, the function of shape, and the importance of a sound design.

Earth science is introduced through a study of weather and the water cycle. In April, students have a mini-unit centered around Earth Day. The unit is based on current environmental issues that the students feel passionate about. The year concludes with a botany unit in which students study pollination, seeds, and plant life cycles. Throughout the year, students become familiar with such concepts as the scientific method, problem solving, and the trial and error process. Children are encouraged to participate in the LS Science Fair.

SOCIAL STUDIES

The theme of “Families/All About Me” gives first graders an opportunity to explore the full range of what the concept can mean. Children begin the year by describing their own family makeup. Through children’s literature, projects, and class discussions, they become sensitive to and appreciative of similarities and differences in families. In addition, the students’ parents visit the class to discuss their heritage (place of birth, where they grew up, etc.) and share facts and customs of that area. Shifting focus closer to home, the children study the history and sights of the District of Columbia.

In addition to our study of families, we discuss famous Americans, the African-American experience, and special holidays and celebrations from various cultures and religions. We do an extensive study of Martin Luther King, Jr. and the Civil Rights movement. Children read stories, learn protest songs, and make timelines of the events and learn the meaning of Dr. King’s message. This intensive study makes a smooth transition into our month-long examination of Black History.

Finishing the year, first graders learn all they can about our great United States. We learn beginning geography and map skills, then “travel” through the U.S., exploring regional facts and culture such as music, food, landmarks, fun facts, and climate.

TECHNOLOGY

First grade students continue regular use of technology to enhance their reading, writing, math, and social studies skills. They use the desktop computer labs to begin learning the basics of the computer: the functions of the mouse and keyboard, the interaction with the whiteboards, and the differences between a desktop and an iPad. Students also visit the desktop labs to work on beginning keyboarding, research authors, and practice on the First in Math website (a subscribed website that can be used on any computer with internet access.)

In the classroom, iPad apps like Everyday Math, handwriting, spelling and drawing are implemented as they apply to the curriculum.



SECOND GRADE

THE ARTS

Dance (one period a week)

The second grade dance curriculum is a continuation of the movement skill development from first grade. Students explore more complex movement explorations, ideas, and spatial relations. Students learn dance-specific vocabulary words and think critically about their discoveries through dance, allowing them to verbalize their dance experiences. Students also learn about the originality of movement choices, improvising with others, and musicality.

Music (two periods per week in half groups)

Second grade students continue to develop their singing voices through ensemble singing of a familiar children's repertoire, with an emphasis on traditional folk songs, games, and dances. Students learn to read and perform rhythmic notation. Activities include movement, accompanying on xylophones, and playing rhythm instruments.

Visual Arts (two periods per week in half groups)

Second graders continue to work with line, shape, color, and texture with increased concern for composition. The art projects isolate individual elements of design to develop students' awareness and technical skills. They use their imaginations and observe their world closely through a variety of projects. Students are encouraged to invent ways to depict what they see and think.

SERVICE LEARNING

Stewardship and companionship define the Second Grade Service Learning curriculum. In conjunction with the social studies and science curricula, students become caretakers of our local natural spaces, especially the C&O Canal. They study the history and ecology of the area as well as stewardship skills, including trash removal and Leave No Trace practices. In spring, students document their waterside experiences through poetry and art. Students also visit senior centers where they offer joyful companionship. They learn songs and dances to perform. Seniors and students collaborate on seasonal craft projects.

HEALTH AND WELLNESS

The second grade health curriculum encompasses a variety of topics including personal health and fitness, nutrition and healthy eating, disease prevention and control, growth and development, emotional and social health, family life education, prevention of substance abuse, and environmental health. The curriculum is addressed both formally and informally in the classroom as well as in science class, physical education class, and through guest speakers.

In addition to informal meetings, the school counselor provides monthly lessons to help second graders address feelings and engage in positive communication with peers.

LANGUAGE ARTS

Using a Balanced Literacy approach, instruction focuses not only on reading and writing, but also on developing speaking and listening skills. Book Clubs, which are guided-reading groups, provide targeted instruction based on routine assessments made in collaboration with learning specialists. Students at all levels develop decoding and fluency skills. Students grapple with structured response questions, discuss story elements, and practice reading aloud. They also share their thinking with classmates and demonstrate understanding through self-directed, collaborative projects. Word games and puzzles support decoding skills and encourage a love of words. Teachers read aloud daily during snack and lunch. Time is also provided each week for quiet, independent reading.

Students write, revise, and publish poetry, friendly letters, short descriptive narratives, short fiction, persuasive letters, expository paragraphs, and other genres as the need arises. Young writers collaborate with peers and teachers for fluency and cohesion. Throughout the school day, second grade students learn to take notes and respond in writing to learning across the curriculum. Students use a journal to write letters, pose questions, express their feelings, and develop creativity in written language. Our study of writing conventions includes punctuation, grammar, print then cursive penmanship, and spelling of high-frequency words and word patterns.



LIBRARY (ONE PERIOD PER WEEK IN HALF GROUPS)

Second graders visit the library weekly, enjoying stories that emphasize friendship and that connect with their identity studies. The students continue to develop research skills, learning to locate books by using library call numbers. Also, students build upon their knowledge to create a more detailed bibliography and develop skills to evaluate information sources. Activities and exercises, coordinated with the classroom curriculum, teach students how to locate specific books.

MATH

Mathematics is differentiated to meet the individual needs of our students. Within the study of each concept, teachers reinforce skills, encourage exploration, provide enrichment, and challenge learners based on our regular formative assessments. Much of the students' mathematical exploration is done through open-ended problem solving. Project-based, hands-on learning also supplements pencil-and-paper problem solving throughout the year. Students explore math concepts during morning routines in addition to our regular math period. A math specialist joins the two homeroom teachers three times per week, once to plan and twice to co-teach.

We begin the year reviewing familiar concepts of numeration, pattern recognition, money, time, and problem solving. Particular emphasis is placed on basic addition and subtraction algorithms and fact fluency. We continue the year with units in measurement, distributions, multiples of equal groups, equal sharing (division), fractions, and geometry with real-life applications. Students are routinely encouraged to reflect on what they have learned by explaining their thinking.

PHYSICAL EDUCATION (FOUR PERIODS PER WEEK)

P.E. classes in second grade concentrate on the refinement and mastery of complex forms of movement and body control, on the ability to fully and safely explore rhythm and space in gymnastics and dance as well as individual talents, and on the improvement of throwing, catching, kicking, striking, and jump-roping skills through a variety of fitness activities and modified games. Students also participate in an orienteering and Native American games unit during the spring trimester. Classes emphasize the ability to work cooperatively with classmates in both small and large groups in addition to the comprehension and application of play strategies in games, activities, and complex tasks.

SCIENCE (ALTERNATING TWO OR THREE PERIODS A WEEK IN HALF GROUPS)

Located in the Lower School science lab, the second grade science curriculum covers physical and biological science. The year begins with students developing a fundamental understanding of the classification of living and non-living things. Students then focus on each class of animals through a series of hands-on activities, simulations, and research. Students continue to exercise their classification skills while raising live arthropods and to sharpen their observation skills while documenting the stages of metamorphosis. This unit naturally feeds into understanding the basic principles of adaptations and evolution.

In a unit on physical science, students learn about electricity through the study of batteries, bulbs, and motors. Students design and build their own electrically powered car. Students develop skills of observing, measuring, comparing, predicting outcomes, and recording information. The second grade concludes with a look at water ecology and general ecosystems, an opportunity for students to learn to appreciate and respect our environment. The second graders take what they have learned and apply it in the field on their overnight trip in the spring. Children are encouraged to participate in the LS Science Fair.

SOCIAL STUDIES

Our two, year-long social studies threads—Communities and Identities—coincide developmentally with student interest in self and concrete descriptions of community membership. Students learn with visiting experts and through written and hands-on activities, class discussions, field trips, multimedia, and student presentations.

Students systematically begin to explore a multidimensional understanding of identity in a social, cultural context. Ongoing studies provide both a mirror for students to consider the many ways in which their identity is constructed and a window through which they learn about and honor difference among classmates. Students nurture personal pride in their own identity. They develop empathy skills as they learn to value multiple and various identities within and among friends. Finally, the children move beyond generalizations and stereotypes as they study various world cultures with a special focus on diverse American Indian cultures.



Through study of character qualities—virtues—students understand and practice what it means to be a caring individual within a collaborative community. Each week, students take ownership of a particular character quality to emphasize in their actions and observe in others. Our focused anti-bias curriculum bridges our character building and social identity explorations.

TECHNOLOGY

Second graders begin the school year with a working baseline knowledge of technology that they build on and begin learning how to become members of the digital community. Students have regular access to interactive whiteboards, iPads, and desktop computer labs. Each student is subscribed to websites that allow for home/school connectivity, including First in Math and FASTMath. Each student also has an account on the Online Typing Master site to begin the process of proper touch typing skills at school and at home.

Throughout the school year, students are taught how to create and maintain a successful community where each member is valued and feels secure. The Digital Citizenship and Ethics units expand upon this concept. Similar to the content in PK/K and first grades, second grade students are asked to imagine themselves opening up the front door of their home and heading out into the world. The conversation revolves around what choices are needed to keep the student safe, who is there to help guide the student, and how to navigate those situations. There are several discussions, online activities, videos, and written work.

THIRD GRADE

THE ARTS

Dance (four periods a week for 7 weeks)

Third grade dance curriculum is a continuation of the kinesthetic learning and thought process from second grade. Movement qualities and their relation with music and emotionality are introduced in the third grade curriculum. Students learn and perform dance phrases; basic technical elements are introduced. In-depth analysis of the relationship between movement and music is emphasized.

Music (two periods a week for 28 weeks)

Third graders continue to gain an understanding of music through speech, song, rhythm instruments, xylophones, and movement. Students review rhythmic notation and begin to play the soprano recorder to facilitate the learning of melodic notation. As they did in the earlier grades, the students continue to learn folk songs and age-appropriate children's repertoire.

Visual Arts (two periods a week for 28 weeks)

Building on previously learned concepts and skills, the third graders are introduced to elements of composition, proportion and artistic complexity. A variety of assignments are presented in both 2-D and 3-D media. Long-term projects are introduced, incorporating imagination and observation. Projects include 3-D imaginative creatures and self-portraits.

SERVICE LEARNING

Over the years, third grade teachers have developed an ongoing partnership with the bilingual preschool CentroNía for a project that is integrated into the social studies and language curricula. Third graders visit their buddies three times and then host a final celebration at GDS. Most of the children and staff at CentroNía are non-native English speakers, who have immigrated themselves or have family still living in other countries. GDS teachers emphasize the students' experiences when discussing issues of immigration and different cultures in their social studies and language classes.

HEALTH AND WELLNESS

In the third grade, the students learn about community, mental, social, and emotional health. These topics are discussed during class meetings throughout the year. Students learn about making responsible decisions and conflict resolution



through discussion and role play. Family life and identity are also discussed, beginning with the video *That's a Family* and culminating with the Free-To-Be-Me assembly. Personal health and fitness are taught during P.E. classes, and topics of growth and development are covered during science classes.

In an effort to help students' increase their sense of personal responsibility and feelings of empowerment, the school counselor sees the students for monthly class lessons that include habits outlined in the book, *The 7 Habits of Happy Kids* by Sean Covey. They also participate in weekly mindfulness practice and engage in lessons to understand bullying and promote taking a stand against such behavior.

LANGUAGE ARTS

In the third grade, students have multiple opportunities to become more confident, skillful readers who enjoy reading for a variety of purposes. *Units of Study* authored by Lucy Calkins and the *Columbia Teachers College Reading and Writing Project* serve as an anchor resource for teachers. Both word recognition and comprehension strategies such as predicting, summarizing, sequencing, and drawing inferences are emphasized. In literature discussion groups, children read independently, write responses to their reading, and share their interpretations and theories with their peers. Children read texts across a wide range of genres including realistic fiction, fantasy, and expository and narrative nonfiction.

Through our social studies curriculum, students read a variety of expository materials including nonfiction trade books, biographies, historical fiction, and primary sources. Some touchstone texts include *We Came Through Ellis Island: The Immigration Adventures of Emma Markowitz*, *A Lion to Guard Us*, *A Slave Family*, *Charlie's House*, and *The Village that Vanished*.

Children complete comprehension-related activities in varied formats such as study guides, social studies log entries, concept maps, charts, and creative activities to reinforce prior knowledge.

Third graders love to write. Through Writing Workshop, children are encouraged to choose their own topics, develop their writer's identity, and pursue their own writing interests. Children also publish their writing in book form. Third graders gain competence in word processing and frequently use individual iPads during Writing Workshop. Children are also encouraged to write in many genres and across all subject areas.

Our social studies and writing curricula are often intertwined; students participate in a number of interdisciplinary writing exercises that help them to simultaneously hone their foundational writing skills while deepening their content knowledge and understanding. Third graders become more proficient at spelling and writing mechanics. Children have weekly spelling lists based on individualized spelling patterns. The *Write Source Skills* book, as well as individual conferences are used to teach grammar, punctuation, and capitalization.

LIBRARY (ONE PERIOD PER WEEK)

Third Grade library time is devoted to exploring central ideas of information literacy, listening to books that broaden understanding of how literature represents people and cultures, and guided book selection. Use of encyclopedias and map resources—both print and online—recur throughout the year, starting with the Immigration project in the fall and progressing through units about contemporary Africa and the roots of African-American folklore in West Africa. Paraphrasing and understanding the structure of databases are explored in conjunction with science topics, and the concepts of authorship and citation are tied to homeroom projects. Time for choosing independent reading is built into weekly library time.

MATH (FIVE PERIODS PER WEEK)

Third graders continue to work at understanding base-ten numbers, emphasizing place value through a million and beyond. Further work with estimation and determining the reasonableness of an answer precedes formal work with rounding. Students refine their knowledge of multi-digit addition and subtraction with regrouping. Students spend considerable time and focus on set theory, use of arrays, and repeated addition and subtraction, as well as "fair sharing" to solidify multiplication and division concepts prior to learning and mastering fact families through the twelves. Students learn several algorithms for multi-digit multiplication and long division with one-digit divisors and up to two-digit dividends.

Concept understandings of fractions are taught using a variety of manipulatives that emphasize real-world use. Students identify fractions on a number line, fractional parts of a set, and fractional parts of a region. They compare and order fractions, convert between mixed numbers and improper fractions, and find equivalent fractions. Through carefully planned explorations, students record and analyze data, noting significant patterns that lead them to discover standard



algorithms for adding, subtracting, and multiplying fractions. Fraction and money comparisons and connections to decimal notation are made at each step in the learning process.

A more formal focus on the study of geometry includes classification and identification of geometric shapes. The study of lines, line segments, rays, and angles as components of 2-D shapes precedes work with prisms, pyramids, and other 3-D shapes and constructions. Pattern blocks, tangram puzzles, and geoboards support this study. Students continue to gather, record, graph, and interpret data. Students measure area and perimeter, length, temperature, weight, and liquid and solid volume, using both metric and U.S. customary units. Clock reading and real-world problem-solving exercises involving elapsed time are given further attention.

To strengthen rapid recall of addition/subtraction facts and multiplication/division facts, the 24[®] Games (both the Jumping program and the online First In Math[®] program) and other math software programs are used in class and at home on a daily basis. Thinking skills and problem-solving strategies receive considerable emphasis.

A math specialist supports the third grade teaching team in planning lessons and in instructing the students.

WORLD LANGUAGES

Language study begins in third grade when students may choose to study Chinese, French, or Spanish.

Chinese (four periods per week, 30 minutes each)

The third grade Chinese program introduces students to a second language through natural approaches and Total Physical Response (TPR) method with songs, stories, games, exercises, and cooperative group activities. Students develop an understanding of tones and pronunciation in Chinese and develop basic communication skills in listening and speaking, as well as reading and some character writing. This program uses Easy Steps to Chinese Level 1, which offers a developmentally appropriate, task-based curriculum that emphasizes oral communication. The objective is to develop communication skills in a context that is meaningful to the students and can be used in their daily activities.

French (four periods per week, 30 minutes each)

The third grade French program introduces students to a second language through songs, games, exercises, group activities, and basic reading and writing in French. This goes hand-in-hand with the acquisition of the language through Total Physical Response (TPR) method, proven to be very successful with students this age who respond well to concrete methods such as acting, mimicry, and singing. Students also learn about French culture in France as well as in other French-speaking countries. The program uses *Aventures*, Book I and II, which includes textbooks, workbooks, flashcards, and CDs for listening activities and songs. Teachers use multiple resources and websites for francophone culture exposure to engage students and reinforce the vocabulary. The BBC Early Advantage's Muzzy Language Course is used as an enrichment tool to reinforce listening skills and vocabulary enrichment.

Spanish (four periods per week, 30 minutes each)

The third grade Spanish program is a dynamic, interdisciplinary, and developmentally appropriate program for young learners, providing language development through songs, stories, games, exercises, cooperative group activities, and basic reading and writing in Spanish. The goal is to provide an environment where students feel comfortable taking risks and making the inevitable mistakes that are part of the process of learning a foreign language. Students are also introduced to the cultures of Spanish-speaking communities. The program uses *Descubre el español con Santillana, Book B*, which makes language learning a cultural adventure. The main goal of *Descubre* in 3rd grade is the communicative competence of students in the Spanish language by means of cultural-awareness activities that focus on the gradual development of listening, speaking, reading and writing skills. In addition, the BBC Early Advantage Muzzy Language Course is used as an enrichment tool. The program's specific objectives are to introduce students to Hispanic American culture, to foster a positive attitude toward language learning, and to provide a solid foundation for basic communication skills.

PHYSICAL EDUCATION (FOUR PERIODS PER WEEK)

Students in the third grade explore rhythm and space in gymnastics and dance and work to master and control fundamental throwing, catching, kicking, striking, and jumping skills that will be used in more organized games in later grades. Classes emphasize the ability to work cooperatively



with classmates in groups of all sizes and applying strategies in organized games. Students are taught why movement and activities are important to their physical well being.

In the fall, students participate in basketball, soccer, tennis, and volleyball. The winter schedule includes dance, gymnastics, and wrestling. The year concludes with softball/baseball, lacrosse, and track-and-field. Many of the activities are adapted or modified for maximum student participation and success. Students are also challenged to look at the importance of exercise and physical fitness. The first and third trimester also includes the two day per week running program to improve cardiovascular fitness. Each student is encouraged to give her/his personal best and records the number of laps completed each day.

SCIENCE (THREE PERIODS A WEEK IN HALF GROUPS)

In third grade, students continue to develop their scientific and critical thinking skills while learning about the life cycles of plants, astronomy, and the Earth. Students begin the year by observing plants and designing experiments to test what plants need to live and how they reproduce. Through regular excursions on the school grounds and in local parks, students observe and record changes in trees and learn to identify local trees based on leaf characteristics. In the lab, students dissect plants and learn about plant reproduction. As fall progresses, students see the trees dropping their seeds and hypothesize how seed shape, texture, and covering help new trees grow. Discussions of evolution and adaptations take place throughout this discovery and students share their knowledge on a field trip exploring trees at a local national park.

During the winter months, students study the origins of the Universe, our galaxy, and the Solar System. They are introduced to the Periodic Table and learn about elements, atomic structure, and how to build model atoms. Discussions and activities about scale are common throughout this unit. Exploration of the planets of the Solar System, including our own planet Earth, concludes with students making a model of their chosen planet and comparing their planet to others. The unit includes a field trip to the Smithsonian Air and Space museum and local excursions to allow first-hand study of changes in the Earth over recent as well as geologic time frames. The winter months conclude with the Lower School science fair, where students have the opportunity to design

their own experiments and share them with the rest of the school.

With the coming of spring, cherry blossoms bloom and we resume observing the life cycles of plants, dissecting flowers, learning how flowers make seeds, and exploring how different plants and animals have evolved to depend on each other. Advantages and disadvantages of different pollination methods are discussed and students even complete a cost-benefit analysis on how plants direct their energy towards reproduction or survival. A field trip to Great Falls National Park allows students to explore native wildflowers and see changes in the rocks of our local environment. By the end of the school year, many flowers have turned to seed, ready for the next generation of plants to grow, and the next generation of scientists to explore how.

SOCIAL STUDIES

Throughout the third grade year, the students engage in various experiential learning activities, supplemented by many field trips to colonial sites in and around DC. Our overarching theme is the study of people coming to America. We begin by learning about the first Americans and developing an understanding of the broader world in the Age of Exploration.

Much of the year is spent examining three waves of immigration: the Ellis Island and Angel Island eras, the forced migration of Africans to North America, and contemporary immigration. The goal is to view these migrations through multiple lenses, helping develop the children's ability to empathize with immigrants' experiences. The culmination of our immigration study is a month-long research project celebrating the life and experiences of GDS community members who are first-generation immigrants.

As the year continues, our focus shifts to the earliest English Colonies and an in-depth examination of their interactions with the native peoples, looking, once again, at the exchange of knowledge, technology, and culture from different perspectives. A highlight of this unit is the month-long, intensive Pilgrim game in which children take on the role of Pilgrims and work collaboratively within a "colony" to overcome the simulated challenges of early colonial life.

In the spring we continue our study of Colonial America, but with a focus on the life of children—free, indentured, and



enslaved. We study trades, crafts, and daily life leading up to our famous two-day encampment at The Claude Moore Farm at Turkey Run. During those two days, students, teachers, and parents form a community and live together as they examine aspects of the lives of tenant farmers in Virginia in the year 1771! Through the year, students gain an awareness of the intolerance, inequities, and injustices of those times and an appreciation for the freedoms and liberties they enjoy today.

TECHNOLOGY

Third graders are hands-on, energetic learners who like to figure things out and pursue new information, and throughout the academic year they expand their understanding of the wider digital world and the many activities that are or will be available to them. Third grade students like to use all kinds of digital tools, but especially the iPad that each student receives at the beginning of the school year. Throughout the year, they write and edit stories, create media, consult developmentally appropriate websites, and share schoolwork with teachers and with one another. The iPads expand the time available for teaching and learning because library encyclopedias, reference materials, primary documents, and many digital tools are right at hand instead of outside the classroom.

A range of apps and websites including GoogleDocs, First In Math, Britannica, and BookCreator, along with the camera, video, and voice recording iPad features, serve as foundations for learning in third grade classrooms. These digital resources offer students the opportunity to dig more deeply into every subject and create content that demonstrates their knowledge.

In the third grade immigration unit, third graders work in small collaborative teams, recording interviews with GDS community members who have immigrated to the United States, and using this first-hand source material to help them create a detailed presentation poster about each person. A digital reading resource, RAZkids, helps children fine-tune their reading skills and expand vocabulary by crafting interesting reading passages for each reader.

Because third graders are eager to explore and learn more about the digital world, the third grade curriculum includes digital citizenship lessons that concentrate on making choices and decisions, evaluating sites and digital resources, and understanding the concept of personal privacy.

FOURTH GRADE

Collaborative and interdisciplinary, our fourth grade program offers students a deep and rich immersion in four key subjects: English, history, science, and math. Homeroom teachers teach the core subjects. This is the first year when subject areas are taught in separate rooms, challenging students in age-appropriate ways to navigate transitions between classrooms for humanities (language arts and social studies), mathematics and science. Two teachers—one homeroom and one specialist—team teach math. Teachers provide academic and social support for children throughout the year with an emphasis on study skills, organizational skills, and engagement with the students on special projects. Students see their core teachers and their world language instructor each day. Arts, library, and physical education classes have different schedules.

THE ARTS

Drama (four periods a week for 7 weeks)

In fourth grade, drama students explore theatrical design and production. They examine lighting, costumes, and set design as part of the theater-making process. They also work collaboratively to plan and rehearse scenes based on Ancient Greek myths. Throughout this process, students work on improvisation, creative problem-solving, and constructive criticism.

Dance (varies throughout the year and occasionally taught in conjunction with music)

The fourth grade dance curriculum focuses on developing creative problem-solving skills. Students will continue to explore different dance styles and their specific techniques. Students learn longer and more complex dance phrases, which also include different movement qualities as well as an understanding of spatial relations. Students also continue to practice their improvisational skills through different dance experiences.

Music (two periods a week for 28 weeks)

Fourth grade students improve their musicianship through the recognition of melodic notation, singing, movement, soprano recorder, and xylophone activities. Instruments of the orchestra and several composers are studied in conjunction with listening units. In addition, fourth graders sing in chorus or play in the band.



Chorus and Band

All 4th graders have the opportunity to take only band, only chorus, or choose to take both band and chorus.

Chorus meets once a week for 25 minutes. During rehearsals, students experience an age-appropriate repertoire while learning correct singing technique. Students will perform at all the major school assemblies, a December concert with middle and high school singers, the Independent School Treble Festival at the Washington National Cathedral, and the spring concert.

In Band, instruction on wind and percussion instruments is offered to interested fourth grade students. Forty-five minute lessons are given once a week. In January, full beginner band rehearsals are held once a week. The year concludes with a concert in May for the LS and parents.

Visual Arts (two periods a week for 28 weeks)

Fourth graders further refine their technical and organizational skills. Long-term projects are assigned with a focus on more detailed and sophisticated solutions. Emphasis is placed on individual inventiveness stressing realism through a wide range of projects that include jungle drawings, 3-D clay figures, and papier-mâché cakes.

FOURTH GRADE SERVICE LEARNING

The fourth grade has two service projects. As a part of their environmental studies, students run the Lower School paper recycling program, emptying recycling bins throughout the building each week. Fourth graders are also big buddies to GDS PK/K students. They visit the PK/K classrooms regularly and form close friendships with their younger buddies. In addition, the school's "celebrations" are times for service. Students learn that giving to others, particularly those in our community who are hungry, is as rewarding as their traditional parties have been.

HEALTH AND WELLNESS

The fourth grade health curriculum focuses on healthy relationships. Throughout the year, students rotate through lessons that focus on responsible decision-making and the relationships one has with oneself, with others, and with the world at large. Students study personal health and fitness in physical education class and environmental health, disease prevention, human reproduction, and human development in science.

To further their understanding of responsibility and their capacity to problem solve, students participate in monthly lessons with the school counselor on positive communication, conflict resolution, and managing feelings.

HUMANITIES (TEN PERIODS PER WEEK)

Fourth grade students have two periods each day to focus on the Humanities. This interdisciplinary subject encompasses language arts and social studies, allowing students to use their growing reading and writing skills to further explore their world and its history.

Language Arts

Increased competency, interest, and comprehension are the goals of the reading program. A variety of reading materials, including novels, poetry, newspaper articles, nonfiction, charts, plays, and myths, is read by children individually, with partners, or in small groups. Children extend their comprehension by asking and answering questions in reading logs and discussion groups.

A selection of novels from the following list forms the foundation for the reading program:

Breaking Stalin's Nose, Eugene Yelchin

D'Aulaires' Book of Greek Myths, Ingri and Edgar D'Aulaire

Drita, My Homegirl, Jenny Lombard

George, Alex Gino

Rules, Cynthia Lord

Stargirl, Jerry Spinelli

Teachers encourage the students to write in many genres and across all curriculum areas. They learn to express factual knowledge and creative ideas in a logical and clear fashion.

Aspects of grammar and spelling are addressed through the writing process. Throughout the fall, many of the homework writing assignments are autobiographical in nature, culminating in a bound and illustrated autobiography. In the second half of the year, writings are primarily derived from the study of Ancient Greece and mythology. Weekly word study (spelling) is derived from the Words Their Way program. Vocabulary study includes dictionary work, word origins, and word puzzles.

Throughout the year children have opportunities to improve and build confidence in speaking to different audiences through various projects, discussions, and presentations.



Social Studies

In the first half of the year, students broaden their understanding of world geography through a study of the physical features of the planet, the diversity of its inhabitants, and relationships between geography and cultural uniqueness. They begin with a review of the Earth's principal land and water forms and an exploration of world climate patterns. Children explore environmental issues as well as regional and global interconnectedness. They learn to interpret maps and make and label a wide variety of maps of their own. An individual report on a country of the world allows them to apply geographic skills. Map- and compass-study leads to a day-long orienteering session at Seneca Creek State Park in the early spring and later in the year to a three-day camping trip at Prince William Forest that includes negotiating a complicated orienteering course.

The second half of the year begins with a study of ancient cultures and civilizations. Children explore aspects of ancient life. There is a study of Greek history from the Greek expansion to "The Golden Age," culminating in an exploration of the origins of democracy. The year ends with an Ancient Civilizations festival, which includes dramatic performances, displays of student projects, and a luncheon. Fourth graders also engage in a study of the Ancient Mali Empire. Along with learning about the geography, history, religion, and economics of this region, students read and learn about historical figures and how they made an impact on the land and its people.

LIBRARY (ONE PERIOD PER WEEK)

Fourth graders become more proficient at using the online catalog to find books for independent reading and research. Students develop and practice skills important to research, such as finding information in print and online databases. They also explore how authority might influence the reliability of a source. They practice formulating essential questions to guide their research and learn responsible documentation of chosen sources. Ample time is also provided for read-alouds and browsing for independent reading.

MATH (FIVE PERIODS PER WEEK)

In fourth grade, review and reinforcement of our number system, including whole and rational numbers and place value through billions, precede a quick review of addition and subtraction with regrouping. The algorithms for two- by three-digit multiplication and long division with multi-digit

divisors and dividends with remainders are practiced. Mastery of fact families in all four operations is expected, but review is provided for those who need it.

Emphasis is placed on the relationship between fractions, decimals, and percents. Mastery of the algorithms for addition and subtraction of decimal numbers is expected while only exposure to the multiplication and division algorithms is provided at this grade level. Further work on geometry reviews previous concepts of classification and identification of shapes and their components. Students learn to use a straight edge, protractor, and compass as tools that facilitate accurate drawing, measuring, and interpreting skills. Students review and strengthen their measuring skills and refine their ability to perform problem-solving exercises. Students are exposed to the basic concepts of probability and chance.

Students continue to gather, organize, record, and interpret data, and the use of manipulatives in all work strengthens concrete to abstract understandings.

Developing mathematical reasoning and deductive and logical thinking are a major focus all year. Oral and written number games and word problems strengthen skills in the selection of various problem-solving strategies. Students develop and utilize higher-level thinking skills to solve challenge problems from the Continental Math League and Problem of the Week programs. The homeroom teacher and math specialist co-teach fourth grade math.

WORLD LANGUAGES

Chinese (five periods per week, 45 minutes each)

The fourth grade Chinese program continues the students' study of Chinese through natural approaches and Total Physical Response (TPR) method with songs, stories, games, exercises, and cooperative group activities. Students work on understanding tones and pronunciation in Chinese. They develop basic communication skills in listening and speaking, as well as basic reading and writing with Chinese characters. Character typing is introduced this year. This program continues with Easy Steps to Chinese Level 1, a developmentally appropriate, task-based curriculum that emphasizes oral communication skills. Character typing and multimedia resources online are also introduced. The course expands the students' skills in a context that is meaningful to the students and can be used in their daily activities.



French (five periods per week, 45 minutes each)

The fourth grade French program focuses on developing listening and speaking skills as well as cultural awareness. To enhance the latter, each student completes a project on the French-speaking country of his or her choice and further cultural exploration is introduced through French foods. Students are introduced to basic grammar and they learn to speak and write simple French sentences accurately. The Total Physical Response (TPR) method, proven to be very successful with this age student, continues to be used. Students enjoy learning French through singing, acting, games, technology, drawing, conversation, and writing. The text is *Aventures, the Complete French Language Development Program, Book II*.

Spanish (five periods per week, 45 minutes each)

The Fourth grade Spanish program is a dynamic, interdisciplinary, and developmentally appropriate program for young learners, fostering language acquisition through songs, stories, games, skits, cooperative group activities, and basic reading and writing practice. The goal is to provide an environment where students feel comfortable taking risks and making the inevitable mistakes that are part of the process of learning a foreign language. Students are also introduced to the cultures of Spanish-speaking communities. The program uses *Descubre el español con Santillana, Book C*, which makes language learning a cultural adventure. The main focus of the program in 4th grade is the communicative competence of students in the Spanish language by means of cultural-awareness activities that promote the gradual development of listening, speaking, reading, and writing skills. In addition, the BBC Early Advantage Muzzy II Language Course is used as a language enrichment tool. The program's objectives are to introduce students to Hispanic American culture, to foster a positive attitude toward language learning, and to provide a solid foundation for the development of basic communication skills.

PHYSICAL EDUCATION (FOUR PERIODS PER WEEK)

P.E. classes in fourth grade apply the basic fitness, agility, and endurance movements, as well as manipulative ball, stick, and racquet skills learned in previous grades as students are introduced to more traditional organized games and activities. They continue advanced exploration of rhythm and kinesthetics in gymnastics and dance, both individually and in groups of varying sizes.

In the fall, students participate in basketball, fitness, badminton, soccer, tennis, Ultimate Frisbee, flag football, and volleyball. The winter schedule includes dance, gymnastics, and wrestling. Softball/baseball, lacrosse, and track-and-field are offered in the spring. Students are challenged to look at the importance of strategy and physical fitness.

SCIENCE (FIVE PERIODS PER WEEK)

The science curriculum in fourth grade is centered around several real-world investigations. Students begin with a study of their local schoolyard ecology. Students practice observation skills, collect and analyze data, and communicate their findings in a variety of ways. This environmental science unit culminates in a trip on the Anacostia River and a hands-on exploration of our local watersheds. While learning to be stewards of our local environment and in connection with our community service efforts, the fourth graders lead the school's recycling program. To experience this process first hand, we visit a nearby recycling center.

In the late fall, students participate in a computer science unit where they learn to code using the program Scratch. Scratch is a programming language designed and maintained by the Lifelong Kindergarten group at the MIT Media Lab. Students are able to learn the basics of coding and create several projects to demonstrate their understanding.

Students then move into studying energy and collisions. Students investigate how mechanisms change energy by transferring direction, speed, type of movement, and force. Students use their knowledge to design a car restraint system as a final project.

The year concludes with a study of the human body, using our adult-sized plastic dissection models. This is followed by a study of the human reproductive system and the developmental changes that take place during puberty. A human development book list for parents and children is sent home in the spring.

SPECIAL PROJECTS

Each fourth grader does a special long-term project of his or her design four times a year. The first of these acknowledges the children's interest in a whole range of topics, ranging from drama to knitting to carpentry. Other long-term projects



focus on various aspects of the curriculum. The goals of these projects are to enhance the students' ability to research and manage their time effectively. Components of projects are done at home and are jointly contracted by parents and students.

TECHNOLOGY

The goal of the fourth grade technology program is to provide both academic and social support, as students navigate the world of media at school and at home, and to assist students as they complete their long-term research projects.

Fourth grade students are given a GDS email account for the first time, use Google Drive, the internet, and iPad apps to increase their competency and broaden their understanding of the digital world. Students have daily access to iPads, Chromebooks, and desktop labs. These resources are used to introduce, review, and reinforce research, math, and writing skills. Each student is subscribed to websites that allow for home/school connectivity. Math sites include First In Math, FASTMath, and Everyday Math Online. Each student has an account on the Online Typing Master site to continue developing touch-typing skills at school and at home.

The Digital Citizenship and Ethics units are structured aspects of the fourth grade curriculum. The fall focus is on appropriate email use and research skills. In the spring the focus shifts to the science curriculum, as students navigate the world of human reproduction. There are several Town Hall Meetings, small and large group discussions, online activities, videos, and written work.

FIFTH GRADE

Collaborative and interdisciplinary, our fifth grade program offers students a deep and rich immersion in four key subjects: English, history, science, and math. As in fourth grade, homeroom teachers teach the core subjects (humanities, mathematics, science) across four classrooms. Two teachers—one homeroom and one math specialist—co-teach math class daily. Additionally, all teachers provide academic and social support for children through emphasis on study and organizational skills and engagement with the students on special projects. Students see their core teachers and their world language instructor each day. Arts, library, and physical education classes have their own schedules.

THE ARTS

Drama (four periods a week for 7 weeks)

The fifth grade drama curriculum develops skills in the areas of improvisation, character development, ensemble work, and scene performance. Each drama class prepares a short play based on a children's book. The performance is a collaboration with 5th grade music and is presented to the Lower School audience.

Dance (varies throughout the year and occasionally taught in conjunction with music)

The fifth grade dance curriculum reinforces the cognitive, artistic, and physical skills gained throughout the Lower School dance program. Students apply their improvisational skills in creating original dance phrases that incorporate movement qualities, spatial relations, and musicality in relation to emotionality. Fifth grade students perform for their peers in daytime performances.

Music (two periods a week for 28 weeks)

In fifth grade music, students continue to develop performing skills on Orff instruments as they gain fluency in reading melodic and rhythmic notation. Activities include singing, playing recorder, playing xylophones and percussion instruments in ensemble, movement activities, compositions, and structured listening. In addition, fifth graders sing in the chorus or play in the band.

Chorus and Band

All 5th graders have the opportunity to take only band, only chorus, or choose to take both band and chorus.

Chorus meets once a week for 25 minutes. During rehearsals students will experience an age-appropriate repertoire while



learning correct singing techniques. Students will perform at all the major school assemblies and the spring concert.

Students who participated in band in the fourth grade continue their instruction in fifth grade. The program is also open to those who want to begin at this level. Instrument instruction is offered once a week for 45 minutes. Fifth grade band rehearsals are also held once a week for 45 minutes. Students perform for parents in May.

Visual Arts (two periods a week for 28 weeks)

The fifth grade curriculum fosters a deeper understanding of and familiarity with the materials and techniques used in art. Elements of 2- and 3-D design are the focus of long-term projects in printmaking, clay construction, painting, and a variety of other media.

SERVICE LEARNING

Fifth grade students and teachers focus on “Service Learning: Citizenship and Social Justice in Our City.” The students choose four subtopics by doing research about several organizations that address social concerns in our city. We hold seminars, visit agencies, and have guest speakers throughout the school year. Toward the end of the year, students create projects that reflect awareness of what they learned and how they serve as advocates for the community of Washington, DC.

HEALTH AND WELLNESS

The fifth grade health curriculum builds on the fourth grade study of healthy relationships and human development. Students meet for health class once a week, rotating through four units over the course of the year. The major topics are Growth and Development, Alcohol and Other Drugs, Nutrition, and Learning and the Brain. All content areas are introduced in an age-appropriate manner, and instructional techniques are varied and designed to provide a multi-faceted approach. Instruction may include small-group discussions, problem-solving activities, videos, role-play, journal writing, outside speakers, and readings on relevant issues.

Materials have been gathered from a variety of sources; classes follow the guidelines for sexuality education as defined by the National Guidelines Task Force for the Sex Information and Education Council of the United States.

In weekly meetings with P.E. faculty (who are trained health and human development teachers), as well as with their homeroom teachers, students discuss how the body changes and how feelings change during adolescence.

The Mental, Social, and Emotional Health unit explores stress management techniques, conflict resolution strategies, peer pressure, and recognizing bullying.

The Safety, Injury Prevention, and Disease Prevention unit focuses on guidelines for safety in the community. Students learn how to administer basic first aid and prevent unintentional injuries at home and at school. They also explore how the body fights germs and diseases, including the study of different types of communicable diseases: the causes, symptoms, and treatments.

The Growth and Development and Sexuality and Family Life units review the male and female reproductive systems, and stages in the life cycle and the hormonal, physical, and emotional changes that take place during puberty. Students learn guidelines for responsible decision-making, how to resist negative peer pressure, and how to have healthy relationships. Students discuss such issues as friendship, types of family units, and coping with feelings.

In Nutrition, students discuss using dietary guidelines to create a healthy food plate and how to make food choices from a variety of proteins, carbohydrates, fats, fruits, vegetables, fiber, and dairy products in order to fuel their bodies. Students explore factors that influence food choices, the advantages and disadvantages of food popularity and fads, ethnic variations in food, and how to interpret information on food product labels. Fifth graders participate in a four-day program on drug and alcohol education with a facilitator from Freedom From Chemical Dependency, Inc.

Through monthly lessons, the school counselor also supports students in their understanding of and ability to effectively address social issues and emotional health.

HUMANITIES (TEN PERIODS PER WEEK)

In fifth grade, as in fourth grade, students have two periods each day to focus on the humanities. This interdisciplinary subject encompasses language arts and social studies, allowing students to use their growing reading and writing skills to further explore the United States and its history.



Language Arts

The basic emphasis in the fifth grade is on improving reading skills and increasing proficiency in written work. The reading program includes individualized reading activities, whole group reading, and vocabulary study. Students begin basic literary analysis through discussions and written assignments. In addition to reading assigned novels, each student is encouraged to choose an independent reading book to read for a half hour each evening throughout the week. Through the writing program, students continue to gain experience in expressing their ideas and feelings in a clear and articulate form. By learning and applying the rules of grammar and mechanics, students become aware of the structure of the English language.

Writing assignments are frequent and varied, some based on content from the social studies and literature programs, others based on the students' creative ideas and need for personal expression. Process-writing techniques are used and much of the pre-writing strategies—rough and final drafts—are carried out using available technology. A highlight of the curriculum is the Traveling Biographies study, an integrated unit of social studies, reading, report-writing skills, written papers, and oral recitations based on the student's choice of an historical figure.

Core readings and skills books include:

- *Many Thousand Gone: African Americans from Slavery to Freedom*, Virginia Hamilton
- *The Watsons Go to Birmingham*, Christopher Paul Curtis
- *Wordly Wise 3000, Book 5*, Kenneth Hodkinson & Sandra Adams

Social Studies

Fifth grade social studies concentrates on American History with particular emphasis on freedom and justice. The course covers the events leading up to the American Revolution, as well as civics, slavery, the abolition movement, the Civil War, and the American Civil Rights Movement. Students explore the triumph of the human spirit in moments of adversity and injustice throughout history. Through primary sources, guest speakers, film/videos, weekly magazines, and literature, students examine these issues.

Readings, discussions, projects, oral and written reports, simulations, guest speakers, and on-site explorations enable students to become familiar with and experience the historical significance of this region. Teachers and librarians help

reinforce library and research skills. Geography is integrated with the lessons in history, literature, and world events. At the conclusion of each unit, evaluations, activities, and projects allow students to demonstrate knowledge and discuss the historical concepts associated with the topic.

Social Studies Texts include:

- *From Colonies to Country*, Joy Hakim, Oxford University Press, New York, 1999.
- *War, Terrible War*, Joy Hakim, Oxford University Press, New York, 1999.

LIBRARY (ONE PERIOD PER WEEK)

To practice developing information literacy skills, fifth graders conduct research coordinated with the humanities curriculum. The online catalog, databases, and encyclopedias, as well as print encyclopedias and reference materials, provide students information in a variety of formats. Students learn how to use online tools to assist with creating a bibliography. Building on information literacy skills taught in 4th grade, 5th graders are asked to explore how author bias might reinforce stereotypes in works of fiction. Read-alouds and independent browsing time are also an important part of library time. Another important part of the 5th graders work through their library classes is preparing for the Hopper Awards, a unique celebration of books run entirely by students.

MATH (FIVE PERIODS PER WEEK)

The fifth grade math program solidifies skills associated with place value, reading and writing whole numbers, and decimals, fractions, and percents. Students are exposed to exponential notation and integers. The focus on arithmetic concepts includes the meaning of operations, skills and procedures, whole number facts, and extensions in all four operations. Estimation and number theory accompany the study of primes, composites, and divisibility rules. Further skill review and strengthening of algorithms are stressed as applied to multi-digit procedures for whole numbers, decimal, and fraction operations. Properties of number systems are explored through operations with positive and negative numbers, use of parentheses, order of operations, writing and solving equations, relations on number lines, and function models using rules, tables, and coordinate graphs. Number and visual sequences and use of formula models with variables are investigated.



Geometry and spatial sense are further enhanced using proper notations, definitions, and the development of basic relationships for 2-D figures. The students study metric and U.S. customary properties of plane and solid figures, including congruence, similarity, and tessellations of geometric figures. Further extensions of work, including basic measuring of length, weight, angles, perimeter, and area are provided. Students continue to collect and record data using tables, charts, and graphs and further explore probability through oral and written problem-solving.

Students develop and use higher-level thinking skills when solving challenge problems from the Continental Math League and a variety of online sites. Math games are incorporated as much as possible as an enjoyable way to practice number skills, strategies, and logic. The homeroom teacher and math specialist co-teach mathematics to children daily.

WORLD LANGUAGES

Chinese (five periods per week)

The fifth grade Chinese curriculum continues to develop the skills of oral communication, reading comprehension, character writing, and typing through the program Easy Steps to Chinese Level 1 and 2, which includes a task-based curriculum that emphasizes oral communication skills. Students use interactive computer games, online recording, and textbook audio to increase their understanding and practice applying the language to their daily lives, including topics such as physical appearance, clothing, countries and languages, school subjects, making phone calls, weather, season, and describing sickness.

French (five periods per week)

The fifth grade French curriculum continues to refine students' communication skills as third-year language students. Through the Discovering French program, which includes an integrated video to accompany each lesson, students share in the lives of dozens of young people from all over the French world. The vocabulary introduced in fifth grade emphasizes daily life. Grammar is taught for accurate self-expression, both orally and in written assignments. This program introduces the language in an easily comprehensible manner, using useful communicative phrases and expressions. Discovering French includes a book, a workbook, cassettes, a video, and online resources for francophone cultural aspects, including listening, reading and writing activities for more practice and reinforcement. It represents the first level of a program used throughout the Middle School.

Spanish (five periods per week)

Students in fifth grade Spanish focus on enhancing communication skills in addition to gaining a more thorough understanding of Spanish speaking cultures. In class, students are provided with ample opportunities to internalize vocabulary and to use it creatively in new situations. The program, *Realidades I* (Units 1A–5A), features technology-based learning tools such as a companion website, an online interactive textbook, audio files, interactive computer games, and links to scenes of native speakers engaged in real-life situations and experiences. Everyday objects, art, literature, music, rhymes, readers, and projects are uniquely woven together throughout the curriculum, making it easy to integrate language, culture, and communication in the classroom. Based on solid research in second-language acquisition, the curriculum teaches students strategies to be effective communicators, whether listening, speaking, reading, or writing.

PHYSICAL EDUCATION (FOUR PERIODS PER WEEK)

P.E. classes in fifth grade develop skills, strategy, and a sense of teamwork through games and activities. Students apply basic and more advanced fitness, agility, and endurance movements, as well as manipulative ball, stick, and racquet ball skills. They continue their exploration of rhythm and kinesthetics in gymnastics and dance both individually and in groups of varying sizes, and they learn to link moves and stunts into routines.

Students participate in cooperative and competitive activities, which increase skill, strength, and fitness. In the fall, students participate in modified or regular sports such as basketball, soccer, tennis, fitness games, Ultimate Frisbee, flag Football, and volleyball. The winter schedule includes dance, gymnastics, and wrestling. The year finishes with softball/baseball, lacrosse, and track-and-field.

Teachers structure lessons to develop a sense of personal and group safety, strategies to encourage participation in a variety of situations. Students are encouraged to develop an appreciation for more advanced techniques in movement and to incorporate health and wellness in their daily lives.

SCIENCE (FIVE PERIODS PER WEEK)

Located in its own lab and taught by a designated science teacher, fifth grade science blends biology, chemistry, and physical science. Throughout the year, the fifth grade students participate in a hands-on science program that encourages



them to develop the skills and understanding of doing science as real professional scientists would.

The course is divided into a number of distinct units: newspaper backpacks, pullback-car deconstruction, bubble-ology, animal behavior, chemical reactions, Newton's laws, bottle rockets, alternative energy, and the Wind Machine Challenge. An emphasis is placed on the idea that for scientists to answer scientific questions they must design a fair experiment or investigation.

By the end of the year the students will know (among other things) how a spring engine works and how to analyze an object by taking it apart, how much soap to use to make the biggest bubble, what makes a crayfish lift its claws, what attributes make a rocket fly best, and how to build a wind turbine to produce the most voltage from a constant amount of wind. Fifth graders are encouraged to participate in the annual Lower School Science Fair.

TECHNOLOGY

Students in the fifth grade are eager to explore the digital world, and they do so with abandon, becoming more knowledgeable and nimble technology users. Fifth graders use digital tools to discover and collect information, write, edit, work collaboratively, and communicate with their teachers using GDS email, the MyGDS section of the school's website, and shared Google documents. Access is plentiful, and fifth grade children enthusiastically use digital cameras, blogs, GDS online library databases, and curriculum-related websites to enrich or dig more deeply into their studies.

Chromebooks, as well as iPad and Google apps, help fifth grade students become stronger researchers, innovators, and problem-solvers, whether they are figuring out the range of solutions for a math problem or learning more about the giants in the world of social justice. In science, students use a computer-aided design app to fashion buckles and hooks—a part of the backpack challenge—and then they print out the object on a 3-D printer. Response systems such as Socrative allow children to share their knowledge on various topics and teachers to gauge how much their students know and where more work is needed. At the end of the year, the fifth grade Traveling Biographies project requires students to use almost all of their technology skills as they create a project that requires researching an individual, choosing and evaluating

resources, writing and editing a short biography and turning it into presentation that is shared, filmed, and performed throughout the school.

Because they are such fearless digital world explorers, fifth graders also participate in digital citizenship activities, learning more about ethics, digital footprints, decision-making, and privacy—concepts that we encourage them to consider whenever they use technology. Our goal is to help them become stronger and better citizens whether they work in the digital or non-digital world.



SIXTH GRADE

The sixth grade program of studies uses an interdisciplinary team approach in English, history, mathematics, and science.

ENGLISH

Through assigned literature and poetry, discussions, and related writing, the sixth grade studies themes of remembrance, social inequality, and resistance. Reading and writing workshops provide the foundation for the writing program. Both in class and at home, students write, collaborate with peers, and revise different types of writing over the course of the year. Organizational and mechanical skills are taught individually and in group lessons. As part of their grammar study, students review punctuation, parts of speech, and sentence structure. In addition, they build their command of language through vocabulary lessons.

HISTORY

Sixth graders explore the theme of power by considering our driving question, “How do institutions of power develop?” In an inquiry-based class, we dig for the roots of injustices and contemplate the change in societies over time. Students consider issues of equity, equality, and justice in the context of the government, culture, and religion in ancient Egypt. From there, we transition into the study of world religions and belief systems.

Throughout the year we seek to foster curiosity in an active, constructivist classroom through experiential and student-centered learning activities. Class work includes small and large group activities, multimedia projects, independent research, written work, and authentic experiences from religions and cultures studied. Collaboration, creativity, and communication are stressed throughout the year as students learn to develop their historical thinking and discover patterns in experiences throughout time.

Our mission of global competence prompts us to delve not only into the history of events in civilizations around the world, but also the cultures and religions thereof. Students are tasked with considering history and beliefs from multiple perspectives and approaching new ideas from a place of understanding and curiosity instead of allowing assumptions to cloud judgment.

MATH

The goal of the sixth grade math course is to solidify concrete mathematical topics in order to begin making generalizations and using abstract reasoning. The sixth grade math course uses arithmetic operations in order to explore various topics including integers, rational numbers, proportions, expressions and equations, geometry, probability, and estimation strategies. Patterns and visual models are used to develop the meaning of a variable, which gives students the tools to begin to simplify expressions and solve basic equations. Students become familiar with mathematics through open-ended tasks, problem-solving activities, and projects. A variety of resources is used to enrich the curriculum and to build a strong mathematical foundation. In particular students use the online app IXL to reinforce skills they learned in class.

SCIENCE

Sixth grade science focuses on Earth science, and serves as an introduction to programming and robotics. Students actively explore and investigate real-world problems through hands-on activities and collaborative projects. The curriculum maintains an interdisciplinary approach and integrates the sciences with humanities and math.

In the coding and robotics curriculum, students tolerate and respond productively to failure, negotiate differences of opinions, and develop systematic approaches to problem solving. Over the course of these lessons, students learn programming basics, block-based coding, and introductory robotics. One of the tools we use is SNAP!, a block-based reimplement of Scratch with added robotics capabilities. With the Hummingbird Robotics Kits, student make their own robots built out of a combination of kit parts, 3D printed elements, and crafting materials.

Students explore Earth science through computer simulations and hands-on activities. Students build earthquake-resistant structures to complement their study of earthquakes; students investigate Earth’s interior, plate tectonics, and volcanoes through Google Earth applications and explore themes of social justice at the intersection of climate change and poverty.

WORLD LANGUAGES

Chinese

The sixth grade Chinese curriculum continues to emphasize listening, speaking, reading, character writing, and typing.



Chinese culture and oral communication skills are emphasized through the use of music, exercises, cooperative group activities such as role play and skits, as well as corresponding with students in China. Online resources including interactive flashcards, computer games, and voice recording are used to reinforce students practice. Grammar structures are emphasized more this year to ensure accurate communication.

Chinese Text

Chinese for Youth, Level 1, The Far East Book Company, 2009.

French

The sixth grade French curriculum continues to develop student listening and comprehension skills. It also promotes communication skills through acquisition of vocabulary in context. There is a focus on cultural awareness of the French-speaking world through a video introduction to each lesson. There is an emphasis on grammar and verb conjugation for accurate oral and written communication. Students are given frequent opportunity for practice in guided lesson activities. This program uses *Discovering French Bleu*, which includes a book, a workbook, cassettes, and a video and online resources for francophone cultural aspects, including listening, reading, and writing activities for more practice and reinforcement.

Spanish

An introductory course is offered to students who wish to start Spanish in the Middle School. The sixth grade Spanish curriculum focuses on language and culture. For continuing Spanish students, the sixth grade curriculum continues with *Realidades I* (Units 5B–9A). This material offers students a wide range of useful, creative, and motivating tools to build language proficiency and to facilitate a smoother transition to a more advanced level. Cultural and video materials enrich a new thematic vocabulary, and technology is integrated with the instruction of each chapter. The curriculum website, an interactive textbook, a video mystery (¿Eres tú, María?), computer lab time, research project assignments, and text preparation are some of the tools that teachers use during instruction or as alternative assessment. Extra vocabulary and grammar practice meet the needs of a diverse population within the classroom. The program also presents heritage readers, a wide selection of thematic and authentic readings from around the Spanish-speaking world, better preparing our students to be active participants in the global community. Through a variety of activities in meaningful contexts, we ensure that students develop increased fluency in the four language skills: reading, writing, listening, and speaking.

THE ARTS

Sixth grade students study drama, music, and visual arts on a rotating basis for their core arts. For enrichment arts, students choose band, chorus, or dance.

CORE CURRICULUM

Drama/Dance

The sixth grade drama program focuses on performance. Students have a unit of movement improvisation, which includes both physical and combined physical and verbal improvisation. This exploration helps develop actors' physical performance skills, their spatial awareness, and also the difference between solo and ensemble improvisation. Students further their performance skills through character development, creation and performance of original monologues, and presentation of self-directed scenes from various sources.

The sixth grade core dance program focuses on experiencing the history of dance through musical theater. In the first unit, students learn the evolution of the use of dance in musical productions while also learning the dances themselves. Folkloric dances, Baroque dance forms, and elements of jazz dance are just a few of the dance skills students learn in the first unit. In the second unit, students choose a musical theater production, study the importance of its message, create characters in relation to that study, and recreate a dance scene for a peer performance.

Music

Students continue to develop the skills studied in fifth grade and learn more advanced concepts in melody, harmony, rhythm, tone color, and form. They are challenged to create original compositions using these skills. Singing, movement, playing xylophones, and listening activities are a constant in the music room.

Visual Arts

Sixth grade students examine formal elements of design. Positive and negative space are explored in two and three dimensions. Close attention is paid to detail, complexity, and formal composition, with emphasis on planning and execution. Students are encouraged to apply their individual creativity through assignments that include linoleum-cut printmaking, collage, painting, perspective drawing, and clay construction.



ENRICHMENT CURRICULUM

Band

The band program continues in sixth grade with instrument instruction once a week for 45 minutes and three times a week in ensemble. Sixth graders band participants are members of the Middle School Band, which performs twice a year.

Chorus

As part of Middle School Chorus, sixth graders meet three times a week for 45 minutes: two grade-level rehearsals and one combined rehearsal with the seventh and eighth grades. Students learn the fundamentals of proper vocal technique through singing a wide-range of vocal repertoire. The Middle School Chorus performs at major assemblies and festivals. All participate in the evening concert held each spring.

Dance

The 6th grade dance curriculum is “The World of Dance,” in which students learn a variety of dance styles and rhythms from all around the globe, including samba, hip-hop, tarantella, dhabke, among many others; students also learn formal dance styles including improvisation, acrobatics, and modern dance. They experience being part of a dance ensemble and perform in an evening showcase.

SEMINAR

Many of us know and can quickly share that GDS was founded in 1945 as the first racially and religiously integrated school in DC; however, we may not be able to quickly explain what that means to the School and to each of us as members of our school community. In this course, we’ll explore identity development, systemic inequities, American civil rights movements, and advocacy. Through a variety of different activities, we will explore various aspects of identity and what that has meant socially, culturally, and historically and what that means for us individually and collectively today. Connecting our identity conversations to the 6th grade English and humanities curricula and the middle school diversity assemblies, we’ll delve into the various aspects of identity and begin to explore how we can move forward from understanding to becoming changemakers working to achieve social justice.

COMMUNITY SERVICE

Service

Sixth graders work in the community throughout the school

year. During the fall and spring, students choose from several projects that range from human services to education to environmental conservation. The service program provides an opportunity for students to develop relationships in the community and address authentic needs. Students are invited to research, design, and propose service projects.

Service Learning

Many themes in the sixth grade curriculum have service connections. Faculty are invited to collaborate with the service-learning coordinator and identify thematic units or projects that naturally extend to service opportunities. Connections may result in direct service, indirect service, advocacy, or research and awareness building. No matter the form, students actively participate in the process of understanding, integrating and applying knowledge of subject area(s) to address relevant community issues.

HEALTH AND WELLNESS

The sixth grade meets for health class once a week, and each student rotates through four units over the course of the year. The major topics are Growth and Development, Alcohol and Other Drugs, Nutrition, and Learning and the Brain. All content areas are introduced in an age-appropriate manner, and instructional techniques are varied and designed to provide a multi-faceted approach. Instruction may include small-group discussions, problem-solving activities, videos, role-play, journal writing, outside speakers, and readings on relevant issues.

Materials have been gathered from a variety of sources, classes follow the guidelines for sexuality education as defined by the National Guidelines Task Force for the Sex Information and Education Council of the United States.

LIBRARY

Sixth grade students come to the library bi-weekly through their English classes to choose books for independent reading. Additional library classes are scheduled as needed to support students through research-based projects. Skills taught include refining a research question, choosing an appropriate source and creating a bibliography.

PHYSICAL EDUCATION

The sixth grade program refines motor skills and game strategies and works to improve student cooperation and teamwork. Drills



are designed to improve skill, strength, fitness, and general comprehension of game concepts and strategies.

In the fall, students participate in soccer, tennis/badminton, and volleyball. The winter schedule offers gymnastics, wrestling, and basketball. The year concludes with baseball/softball and lacrosse. Sixth grade students are placed on organized teams with other classmates and participate in an intramural program in preparation for the seventh and eighth grade interscholastic program. They compete against their peers in an atmosphere that promotes healthy competition. The games are officiated by P.E. faculty; however, students are responsible for their team's sports-citizenship, warm-up activities, and substitutions.

STUDY SUPPORT AND STUDY SKILLS

Throughout the year, sixth graders participate in a study hall program. Teachers and the learning specialist are available to work with students one-on-one as needed. Students work with their teachers and advisors to determine the appropriate subject area for concentration on a weekly basis.

In addition, sixth graders have a weekly self-contained study skills class. Adjusting to middle school, grades, self-advocacy, time management, test strategies, and note-taking are a few of the topics covered.

TECHNOLOGY

Sixth graders use the technology classrooms and mobile laptop lab extensively in their writing projects. The mobile laptop lab enables teachers to conduct technology activities, either using software programs or the web, in any classroom. Online research, using library resources as well as the internet, complements coursework, including a unit on the Harlem Renaissance, family history projects, and Ancient Civilizations. Sixth graders participate in weekly "tech time" where they explore topics surrounding Internet safety, technology ethics, cyberbullying and information security. Students also work on presentation skills during these times.

Math and science classes incorporate Microsoft Excel, Geometer's Sketchpad, digital cameras, and interactive web resources to develop presentations with text, data tables, graphs, and illustrations. Photoshop Elements is used for a variety of projects, including art projects and image editing.



SEVENTH GRADE

Seventh grade English, history, mathematics, science, and language classes meet for the equivalent of five periods per week.

ENGLISH

The English program in the seventh grade consists of studies in literature, writing, grammar, and vocabulary. Readings include short stories, novels, plays, and poetry. Class discussions and written assignments focus on the formal elements of literature. The writing program uses a teacher-directed approach to process writing. Students discuss and explore the theme of heroes and their struggles. They write expository, creative, and personal pieces with the goal of completing a body of accurate, thoughtful, and original work. The study of grammar and vocabulary helps students understand and use the skills necessary for successful essays, stories, and poems.

HISTORY

Seventh grade history examines power by considering the ways in which institutions of power can be broken down or reorganized. Our focal point is global revolutions and power struggles. Students begin the year discussing the Haitian Revolution and asking students to connect our understanding of Haiti to other Caribbean nations. From there, students move to the Indian subcontinent where they consider the competing philosophies of social change that led to partition. In the spring, students learn about the Iranian Revolution and how revolutionary movements have continued to change and evolve.

Throughout the year, we will consider the impact of historical colonization on revolution. In the study of each region, we will contemplate the influences of geography and cultural exchanges and attempt to identify challenges or obstacles to stabilizing post-revolutionary societies. Students track themes embodied in the power struggles throughout the year, gathering data and information, which they will use to create their culminating “Power Project” performance—a year-end multimedia performance.

Each class is a community, and we seek to stimulate curiosity and critical thinking. Class work includes small and large group discussions, thinking routines, special projects, simulations, debates, and research. Our goal is to foster global competence by recognizing perspectives, communicating ideas, and

brainstorming solutions to current problems.

History resources, texts and reference materials: Students receive excerpts of different texts and sources. Teachers plan their lessons based on the following texts:

- Teacher collected primary source texts and images from Haiti, India and Iran
- Excerpts from the *Brown University's Choices for the 21st Century Education Program*, Brown University Press, Providence, 2010.
- *Making Thinking Visible: How to Promote Engagement, Understanding, and Independence for All Learners*, Ritchhart, R., Church, M., & Morrison, K. (2011). San Francisco, CA: Jossey-Bass.

MATH

Seventh Grade Pre-Algebra is an opportunity for students to explore math from multiple perspectives and apply previous understandings of mathematics. Throughout the year students connect mathematics to multiple disciplines including history, science, art, current events, and social justice. The contextual problems and applications allow students to reason abstractly while solidifying their numerical fluency. Students also look for patterns and develop generalizations of them. They engage in lessons and projects involving number systems, geometry, ratios and proportional relationships, expressions and equations, and statistics and probability. The process is emphasized by students justifying and communicating their reasoning and developing flexible thinking by approaching tasks with multiple problem-solving strategies.

Algebra I

Algebra I is a high school level course that covers the fundamental concepts of beginning algebra to develop a strong foundation for upper level mathematics. Algebraic concepts are viewed from multiple perspectives to help students develop their abilities with abstraction and generalization. Students explore linear, quadratic, and exponential equations, systems of equations, polynomials, and rational expressions. The scope of the course is broad; therefore, students must have strong study skills and a serious commitment to careful, thorough, and sequential work. Students are expected to follow through with self-directed practice at home. A strong foundation in and mastery of all the topics, concepts, and skills of a broad-based pre-algebra program are essential prerequisites for success in Algebra I. Multiple resources, texts, and computer-based



applications are used to enrich the curriculum.

SCIENCE

Seventh grade science begins with an in-depth study of the Chesapeake Bay, which includes an overview of the geography, geology, and environmental issues of the Bay. This study includes a three-day trip to the Bay with the Chesapeake Bay Foundation. Students test local water and soil samples to analyze their local ecosystem's health.

From the very large ecosystem of the Chesapeake Bay to the very small work of microscopy, the next unit of study delves into the tiny world of cells and the foundation of life. Types of cells, structure and function of organelles and Mendelian genetics are covered. Students complete a cell analogy project to concretely understand the parts of a cell.

The final third of seventh grade science is devoted to the study of human body systems, and uses microscopes, laboratory experiments, and models to aid student understanding.

WORLD LANGUAGES

In seventh grade, students may continue their study in Chinese, French, or Spanish or elect to take Latin. Taken together, the seventh and eighth grade language courses are the equivalent of a year of High School language study.

Chinese

The seventh grade Chinese program continues to emphasize listening, speaking, character reading, and typing. This course strengthens students' grammar and vocabulary. Chinese culture and oral communication skills are emphasized through the support of music, exercises, cooperative group activities such as role-play and skits, as well as activities connecting with students in China including video chats and pen-pal letters. Online resources including interactive flashcards, computer games, and voice recording are used to reinforce students practice.

Chinese Text

Chinese for Youth, Level 1 & 2, The Far East Book Company, 2009.

French

This course builds a solid conversational base by developing listening and speaking skills. Classes are conducted almost exclusively in French. Reading and writing are introduced progressively and are always preceded by aural-oral drill. Grammar is presented to develop accurate oral patterns. The

majority of class time is spent developing active, practical use of French, chosen for its everyday use and relevance to the students' lives and interests. The text provides information about other French-speaking cultures. Tapes of native speakers supplement the text and sharpen listening comprehension.

French Text

Discovering French, Blanc, Jean-Paul and Rebecca M. Valette, D. C. Heath and Co., Lexington, MA, 1993.

(Includes workbook, tapes, videos)

Latin

The objective of this course is to enable students to understand Latin as a means of communication by reading, writing, speaking, and listening. Using the "practomimic" learning experience of Operation LAPIS, as well as techniques modified from Where Are Your Keys, TPRS, and SALVI's workshops in active Latin, students are introduced to basic Latin vocabulary and grammar. In addition, students gain an understanding of Ancient Roman culture and influence through readings from their text in the target language. The goal for seventh grade is to introduce the students to the ins and outs of an inflected language and to boost written and oral proficiency of Latin.

Spanish

The seventh grade Spanish curriculum helps students further develop skills in speaking, reading, listening, and writing. Designed to provide multiple learning opportunities for language usage, phonics, and language structure, the curriculum uses *Realidades II* (Units 1A–5A), which offers students challenging goals, effective feedback, and a variety of activities. Knowledge of basic structures and vocabulary is reviewed and expanded to enable students to communicate at a low- to intermediate-level in real-life situations.

The program incorporates a full range of material including technology components such as online tutorial practices, end-of-chapter tests, interactive games and competitions, and an interactive textbook to meet the needs of students in today's Spanish classroom. The seventh grade curriculum teaches culture and communication through colorful geography maps, key vocabulary, basic grammar reviews, reading and writing activities, hands-on activities, interdisciplinary study, and a mystery video story (*En busca de la verdad*), among other approaches. Our goal in seventh grade is to develop the students' ability to use the target language for real purposes in culturally



appropriate ways. The 21st century global community awaits these students who are eager to communicate and understand.

THE ARTS

During the seventh and eighth grade, students take one term each of drama, music, and visual arts. This in-depth study of the arts rotation is completed at the end of the first semester in the eighth grade. Core curriculum classes are complemented by two-day enrichment classes.

CORE CURRICULUM

Drama

This course focuses on the development of acting and directing skills. Students participate in a variety of improvisational exercises on their own, with partners, and in a group. These improvisations are either movement-based or both physical and verbal. Students begin the study of character development through both writing and acting exercises. Students also experience scene development as actors and as directors. They learn about dramatic structure and objectives through writing, acting, observing, and directing their own self-devised scenes. Each student is cast in a scene, and they are responsible for character development, set design, and costuming. These scenes are performed for a student audience.

Dance

The Core Dance curriculum focuses on dance literacy. Through the study of Laban fundamentals such as Labanotation, effort, and shape, students develop their original ways to record, express, and reproduce dance. The curriculum also incorporates the use of technology and new media for dance. Students explore and discover the new ways in which dance and technology are being used by dance professionals all around the globe.

Music

This course includes the study of opera, ballet, history of rock 'n' roll, and chord progressions written for Orff instruments. Students will use available technology to compose and create a presentation for each unit.

Visual Arts

In this course, emphasis is placed on observation, composition, visual expression, and skill building in 2- and 3-D techniques. Projects include painting, collage, representational clay sculpture busts, perspective drawing, and contour drawing through observation.

ENRICHMENT CURRICULUM

Band

Students who have been playing an instrument continue with three weekly band rehearsals in seventh grade. As part of the Middle School Band, they perform in the winter and spring.

Chorus

As part of the Middle School Chorus elective, seventh graders meet for three 45-minute classes a week, two grade-level rehearsals, and one combined rehearsal with the sixth and eighth grades. Students learn the fundamentals of proper vocal technique through singing a wide range of vocal repertoire. The Middle School Chorus performs at major assemblies and festivals. All participate in the evening concert held each spring.

Visual Arts

This class encourages self-expression and an opportunity for students to focus on long-term projects and work at their own pace. Individual ideas are expressed through multimedia sculpture, clay constructions, painting, and graphic design.

Playwriting

In this course, seventh graders explore play structure, character development, and the mechanics of dramatic writing. They develop their own short plays in a writing workshop format, using collaboration and peer feedback to develop and strengthen their scripts. Each final script is shared as an informal staged reading during class time.

Dance

The 7th grade dance curriculum is "The World of Modern Dance," in which students learn and experience, through technique classes and choreography, the history of modern dance in America. 7th grade enrichment dance students join their 8th grade counterparts as part of a dance ensemble and perform together in an evening showcase.

Theater Improvisation (depending on interest)

Students explore non-scripted scenes using props, established situations, and suggestions from classmates. Spontaneity and creativity are important tools fostered throughout the course.

Stage Makeup (depending on interest)

Students explore the many ways that makeup enhances performances. Units include basic application, how to



highlight and contour the face, aging techniques, and facial hair construction.

COMMUNITY SERVICE

Service

Seventh graders work in the community throughout the school year. During the fall and spring, students choose from a menu of projects that include issues related to education, human services, culture and the arts, and environmental conservation. The service program provides an opportunity for students to develop relationships in the community and address authentic needs. Students are invited to research, design, and propose service projects. When appropriate, service work includes a culminating project, created in collaboration with community organization partners.

Service Learning

Many themes in the seventh grade curriculum have service connections. Faculty are invited to collaborate with the service-learning coordinator and identify thematic units or projects that naturally extend to service opportunities. Connections may result in direct service, indirect service, advocacy, or research and awareness building. No matter the form, students actively participate in the process of understanding, integrating and applying knowledge of subject area(s) to address relevant community issues.

HEALTH AND WELLNESS

In seventh grade, students have health class each week for two quarters. Major topics include sexuality, drugs and alcohol, stress management, and communicable and chronic diseases.

All content areas are introduced in an age-appropriate manner and instructional techniques are varied and designed to provide a multi-faceted approach. Instruction includes small-group discussions, problem-solving activities, videos, role-play, journal writing, outside speakers, and readings on relevant issues.

Materials have been gathered from a variety of sources, and there has been a significant effort to follow the guidelines for sexuality education as defined by the National Guidelines Task Force for the Sex Information and Education Council of the United States.

LIBRARY

Seventh grade students use the library for research across the curriculum. With the help of classroom teachers and the librarian, seventh grade students are refining their ability to craft a research question and then choose and document the appropriate sources

to support that question. Students are encouraged to visit the library on their own for selection of independent reading materials, and the librarian periodically visits classes to highlight specific material to spark student interest.

ATHLETICS

The mission of the Georgetown Day School MS athletic program is to provide all students with the opportunity to represent the school and compete interscholastically in a wide variety of sports. It is our hope that each student athlete will experience the challenges and triumphs that are unique to sport. GDS athletics provide a supportive atmosphere in which coaches challenge the intellectual and physical abilities of our student athletes, foster strength of character, and encourage concern for others. It is our goal that the athletic experience of each student will be framed within a context that instills self-discipline, dedication, pride in performance, respect for others, and a lifelong love of sport.

STUDY SUPPORT AND STUDY SKILLS

Throughout the year, seventh and eighth graders participate in a study hall program one to two times a week. Teachers and the learning specialist are available to work with students one-on-one as needed. Students work with their teachers and advisors to determine the appropriate subject area for concentration on a weekly basis.

In both seventh and eighth grades, students have a bi-weekly opportunity to have a class dedicated specifically to study skills. Self-advocacy, time management, test strategies, and note-taking are a few of the topics covered.

TECHNOLOGY

Seventh grade English, world languages, math, and social studies classes use technology in a way that is fully integrated into their classes. At this level, students use almost every software tool on the network. Students may develop a spreadsheet, conduct a science simulation, publish a newspaper, use audio recording technology in language classes to demonstrate speaking proficiency, write an essay, or develop a study chart. Students also use the internet to find and evaluate materials as well as for research on social studies topics such as Islam and the history of the Middle East, Africa, and medieval Europe. The technology department collaborates with the librarians to identify the skills needed for precise web searches and careful evaluation of internet resources.



EIGHTH GRADE

Classes in eighth grade English, history, mathematics, science, and foreign language meet for the equivalent of five periods per week.

ENGLISH

The eighth grade English course comprises both writing and literature. The first half of the year, students focus on paragraphs, learning to craft topic sentences, choose suitable methods by which to develop them, and adhere to the rules of punctuation and usage. Second semester, they learn to write five-paragraph essays, honing the skills and polishing the techniques with which they worked in the first. Students read four core novels and a host of poems, essays, and short stories; in addition, they examine numerous paintings and sculptures. They read independently throughout the year and, for the culminating writing assignment, write a five-paragraph essay about the literature they studied.

HISTORY

The eighth grade curriculum centers on four aspects of American history: the Colonial bid for autonomy; the Constitution and United States government, 19th century assumptions regarding race and gender, and America's place in the modern world. As we explore these topics, we strive to help students balance the mastery of facts with the understanding of ideas.

Highlights include our simulation of the Second Continental Congress, where students become delegates deciding whether or not to sign the Declaration of Independence. Our capstone project is the Constitutional Issue Project, which asks students to look at a controversial issue from many different vantage points, with the goal of understanding multiple perspectives on a complex issue. As part of the project, students participate in Hill Day, where they interview people with different positions on each topic. After their interviews and research, students write an argumentative essay that concludes with an informed personal position on the topic.

History Texts:

- *The United States Constitution: What it Says, What it Means (a hip-pocket guide)*, Oxford University Press, New York, 2005.
- *The Nystrom E-Book Atlas of American History*, Nystrom, Chicago, 2011.
- Zinn, Howard. *A Young People's History of the United States*:

Columbus to the War on Terror. New York, Seven Stories Press, 2009.

- Monk, Linda, jd. *The Words We Live By: Your Annotated Guide To The Constitution*.
- Teacher-Generated material

MATH

Algebra I and Geometry are offered in eighth grade.

Algebra I

Algebra I covers the fundamental concepts of beginning algebra to develop a strong foundation for upper level mathematics. Algebraic concepts are viewed from multiple perspectives to help students develop their abilities with abstraction and generalization. Students explore linear, quadratic, and exponential equations, systems of equations, polynomials, and rational expressions. The scope of the course is broad; therefore, students must have strong study skills and a serious commitment to careful, thorough, and sequential work. Students are expected to follow through with self-directed practice at home. A strong foundation in and mastery of all the topics, concepts, and skills of a broad-based pre-algebra program are essential prerequisites for success in Algebra I. Multiple resources, texts, and computer-based applications are used to enrich the curriculum.

Geometry

In Geometry, students find a solution to a problem through both inductive and deductive reasoning. The course explores thoroughly the following topics: lines and planes, angles, parallelism and perpendicularity, congruence and similarity, circles, constructions and local areas, volumes, transformations, and analytic geometry. It includes the formality of an axiomatic method of deductive proof and blends other topics into the syllabus. Algebra is heavily integrated into the geometry curriculum as well as varied problem solving tasks. Students use multiple means of exploring geometry, including computer-based applications such as Geogebra, as well as using a graphing calculator, compass and straightedge.

SCIENCE

Eighth grade science builds on skills taught throughout the Middle School science program. Laboratory experiments, centered on the study of matter and energy, serve as a foundation for scientific investigation and experiential learning.



Students learn that mass is conserved when it changes state, and that matter has characteristic properties that can be used to identify unknown substances. Critical-thinking skills are emphasized through numerous writing assignments, including lab reports in which students use data collected in the lab as supporting evidence for analysis.

Eighth-grade science classes introduce students to the Periodic Table of the Elements, chemical reactions, and separation techniques. At the end of the year, students are equipped to analyze, separate, and identify the different parts of an unknown mixture. Careful data collection, safety, collaboration, and study skills are emphasized throughout the year. Physical science is further explored through the study of physics including projectile motion, force, velocity, and the electromagnetic spectrum.

WORLD LANGUAGES

Chinese

The eighth grade Chinese program continues to develop students' skills in listening and speaking Chinese, as well as reading and writing Chinese characters. Chinese culture and oral communication skills are emphasized with the use of music, stories, exercises, videos, and cooperative group projects such as in-class skits. This course builds the students' grammar and vocabulary, and continues basic listening, speaking, reading, and writing skills in a context that is meaningful to the students and can be used in the students' daily activities.

French

The eighth grade French program continues to expand the students' linguistic capabilities in listening, speaking, reading, and writing. New grammatical concepts are introduced progressively while at the same time provision is made for review and reinforcement of already acquired language patterns. The text captures students' interest with real-life conversational situations between young people from the French-speaking world and its cultures. Videos and CDs further enrich the program. The students have opportunities to work in groups on cultural and cross curricular projects. Students have also the opportunity to develop and record their own dialogues.

French Text

Discovering French, Rouge, Jean-Paul and Rebecca M. Valette, D. C. Heath and Co., Lexington, MA, 1993. (Includes workbook, tapes, videos)

Latin

The objective of this course is to enable students to understand Latin as a means of communication by reading, writing, speaking, and listening. Continuing to use the "practomimic" learning experience of Operation LAPIS, as well as techniques modified from Where Are Your Keys, TPRS, and SALVI's workshops in active Latin, students are introduced to increasingly more complicated Latin vocabulary and grammar. In addition, students continue to gain an understanding of Ancient Roman culture and influence through readings from their text in the target language. The goal for eighth grade is to deepen students' understanding of the Latin language and to continue to develop their proficiency, particularly reading comprehension and composition. In the spring, students will have the opportunity to take the National Latin Exam and the placement test for high school.

Spanish

The curriculum in eighth grade Spanish completes the second half of *Realidades II* and continues using a recursive scope and sequence to revisit themes from previous chapters. This natural recycling allows for important review and re-teaching. Students expand their vocabulary, grammar, and cultural understanding as they visit each theme in greater depth and improve their listening, reading, speaking, and writing skills. As in previous years, the program offers a complete selection of materials and technology components to meet the needs of students in today's Spanish classroom. The eighth grade curriculum introduces culture and communication through geographic maps, key vocabulary, grammar reviews, reading and writing activities, Videohistorias, language and culture connections with other disciplines, hands-on activities, videos, and speaking opportunities.

THE ARTS

Students in eighth grade take one semester of drama, music, or visual arts, completing the rotation begun in seventh grade. In the second semester, students choose one of the arts elective courses in which a more specialized curriculum is presented: Jazz—History and Performance; Introduction to Film; Play Production or Stage Makeup (depending on interest); and Musical Theater Workshop. These core elective classes meet twice a week and are complemented by two-day enrichment classes



CORE CURRICULUM

Drama

This course focuses on the development of acting and directing skills. Students participate in a variety of improvisational exercises on their own, with partners, and in a group. These improvisations are either movement-based or both physical and verbal. Students begin the study of character development through both writing and acting exercises. Students also experience scene development as actors and as directors. They learn about dramatic structure and objectives through writing, acting, observing, and directing their own self-devised scenes. Each student is cast in a scene and is responsible for character development, set design, and costuming. These scenes are performed for a student audience.

Dance

The Core Dance curriculum focuses on dance literacy. Through the continued study of Laban fundamentals such as Labanotation, effort, and shape, students develop their original ways to record, express, and reproduce dance. The curriculum also incorporates the use of technology and new media for dance. Students explore and discover the new ways in which dance and technology are being used by dance professionals all around the globe

Music

This course includes the study of opera, ballet, history of rock 'n' roll, and chord progressions written for Orff instruments. Students use available technology to compose and create a presentation for each unit.

Visual Arts

In this course, emphasis is placed on observation, composition, visual expression, and skill-building in 2-and 3-D techniques. Projects include painting, collage, representational clay sculpture busts, perspective drawing, and contour drawing through observation.

ENRICHMENT CURRICULUM

Band

The eighth grade band program is the culmination of study begun in fourth grade. Students rehearse for three periods a week and perform in the winter and spring.

Chorus

As part of the Middle School Chorus elective, eighth graders meet for three 45-minute classes a week, two grade-level rehearsals, and one combined rehearsal with the sixth and seventh grades. Students learn the fundamentals of proper vocal technique through singing a wide range of vocal repertoire. The Middle School Chorus performs at major assemblies and festivals. All participate in an evening concert held each spring.

Dance

In 8th grade dance, students experience a more rigorous training in modern dance, choreography, improvisation, and performance of their "World of Contemporary and Post-Modern Dance" curriculum. 8th graders also enjoy opportunities to perform with the HS dance troupe, Fata Morgana, and at off-campus performances as well as a regional dance festival. Lastly, 8th grade enrichment dance students join with their 7th grade counterparts as part of a dance ensemble and perform together in an evening showcase.

Visual Arts

This enrichment class provides an atmosphere that encourages self-expression and is an opportunity for students to focus on long-term projects and work at their own pace. Individual ideas are expressed through clay constructions, mixed-media sculpture, painting, and graphic design.

Stage Makeup (depending on interest)

Students explore the many ways that makeup enhances performances. Units include basic application, how to highlight and contour the face, aging techniques, and facial hair construction.

COMMUNITY SERVICE

Service

Eighth graders work in the community throughout the school year. During the fall and spring, students choose from a menu of projects that include issues related to education, human services, culture and the arts, and environmental conservation. Several of these projects are open to eighth graders only, giving students the opportunity to examine issues that require increased maturity and leadership. The service program provides an opportunity for students to develop relationships in the community and address authentic needs. Students are



invited to research, design, and propose service projects. When appropriate, service work includes a culminating project, created in collaboration with partnering community organizations.

Service Learning

Many themes in the eighth grade curriculum have service connections. Faculty are invited to collaborate with the service learning coordinator and identify thematic units or projects that naturally extend to service opportunities. Connections may result in direct service, indirect service, advocacy, or research and awareness building. No matter the form, students actively participate in the process of understanding, integrating, and applying knowledge of subject area(s) to address relevant community issues.

LIBRARY

Through teacher and librarian supported classroom based projects, eighth grade students are refining their information literacy skills, such as in-text citations, recognizing author bias, and reliability of information. Eighth grade students are also encouraged to come to the library on their own for selection of independent reading materials. The librarian visits classes to introduce reading material that complements course topics.

HEALTH & WELLNESS

In eighth grade, students have health class each week for two quarters. Major topics include sexuality and personal change, alcohol and other drugs, body image and nutrition, and personal safety. All content areas are introduced in an age-appropriate manner and instructional techniques are varied and designed to provide a multi-faceted approach. Instruction includes small-group discussions, problem-solving activities, videos, role-play, journal writing, outside speakers, and readings on relevant issues.

Materials have been gathered from a variety of sources, and there has been a significant effort to follow the guidelines for sexuality education as defined by the National Guidelines Task Force for the Sex Information and Education Council of the United States.

ATHLETICS

The mission of the Georgetown Day School MS athletic program is to provide all students with the opportunity to represent the school and compete interscholastically in a wide variety of sports. It is our hope that each student athlete will experience the challenges and triumphs that are unique

to sport. GDS athletics provide a supportive atmosphere in which coaches challenge the intellectual and physical abilities of our student athletes, foster strength of character, and encourage concern for others. It is our goal that the athletic experience of each student will be framed within a context that instills self-discipline, dedication, pride in performance, respect for others, and a lifelong love of sport.

STUDY SUPPORT AND STUDY SKILLS

Throughout the year, seventh and eighth graders participate in a study hall program one to two times a week. Teachers and the learning specialist are available to work with students one-on-one as needed. Students work with their teachers and advisors to determine the appropriate subject area for concentration on a weekly basis.

In both seventh and eighth grades, students have a bi-weekly opportunity to have a class dedicated specifically to study skills. Self-advocacy, time management, test strategies, and note-taking are a few of the topics covered.

TECHNOLOGY

In the eighth grade, students conduct research using online databases and internet resources in technology classrooms, the library, and the 7/8 mobile laptop lab in individual classrooms. Eighth grade students continue to participate in collaborative problem-solving activities on the web. In world languages and arts classes, students use foreign language publications, audio recording technology, and PowerPoint. Math and science classes use spreadsheets, graphs, and other online resources. English classes make extensive use of online resources to supplement assigned readings. In history, students learn selection and design strategies involved in creating effective visual aids to enhance presentations.



HIGH SCHOOL CURRICULUM OVERVIEW



School should prepare students for life as well as college. A GDS education engages students with real-world problems, motivates them by placing them at the center of their learning, teaches them to collaborate across difference, empowers them to connect with resources both at school and beyond our campus, challenges them to think critically and creatively, and prepares them to be active citizens in the world. These beliefs guide the High School to recommend the following course of studies for all its students.

RECOMMENDED COURSE OF STUDIES

The recommended course of study for the High School is:

- 4 years of English
- 4 years of mathematics
- 4 years of a world language
- 3–4 years of natural and physical sciences
- 3–4 years of history and social sciences
- 1 year each of performing and studio arts
- 2 years of physical education
- 9th grade seminar

MINIMUM REQUIREMENTS

The minimum requirements for receiving a Georgetown Day School diploma are:

- Arts, Performing: One year of performing arts.
- Arts, Studio: One year of studio art.
- Community Service: At least 60 hours of service (See guidelines under Community Service.)
- English: Four years of assigned English.
- History and Social Sciences: 9th Grade: Communities and Change; 10th Grade: European History, African History, or World History; 11th Grade: U.S. History, AP U.S. History, or American Studies.
- Mathematics: At least three sequential years of math at the high school level.
- World Languages: Two successive years of the same language completed in high school.
- Ninth Grade Seminar: A required course for all ninth graders, focusing on identity development, cross-cultural communication, conflict management, and cyber ethics.
- Physical Education: Two years of physical education, taken freshman and sophomore year.
- Science: Three years, of which one is a life science and one is a physical science.

COURSE LOAD

The required minimum for each semester's work is five academic courses, unless special circumstances arise. Many students elect to take additional academic, fine arts, or elective courses. GDS encourages all students to pursue their individual passions while exploring our diverse curriculum. Students who persist through our curriculum will be well positioned to gain admission to many colleges and universities. Highly selective colleges will expect students to explore beyond the minimum requirements for a diploma.

COURSE LENGTH

Except where noted, most courses are yearlong (two semesters).

COURSE CANCELLATION

At the School's discretion, any course in which the enrollment is fewer than ten students may be canceled.

INDEPENDENT STUDY POLICY

If a student in his or her junior and senior years has a particular interest in a subject that is not covered in our curriculum, he or she may apply to complete an Independent Study. An Independent Study course is the equivalent of a regular academic course with the same level of rigor expected.

- Independent Studies will be evaluated on a Pass/Fail basis.
- Each Independent Study will be limited to a maximum of three students.

In order for an Independent Study to appear on a GDS transcript the Independent Study must be:

- Supervised by a member of the GDS faculty
- Approved by the Dean of Academic Life



To be approved for an Independent Study, a student must submit an application (available in the Dean of Academic Life's office) that clearly and thoroughly describes the work to be completed, the resources necessary for completion of the work, the scheduled meeting times between student and faculty mentor, and an explanation for how the student work will be assessed. Copies of all assessments that are given in an Independent Study will be filed with the Dean of Academic Life. Proposals for Independent Study will not be accepted after the deadline for adding a course.

PASS/FAIL OPTION (JUNIORS AND SENIORS)

Students in their junior and senior years have the option to take one course pass/fail each semester.

Eligible Courses

The P/F option may not be used to fulfill department requirements but could apply to courses that fulfill the five academics per semester requirement. AP courses as well as a select group of other courses determined by individual departments may not be taken pass/fail. See stipulation about sequential courses under pass/fail grading (next).

Pass/Fail Grading

A 60 or better is a passing grade. In sequential courses (i.e., math, science, and language courses), a 70 or better is required to move on to the next course. Students whose average grade is between 60 and 70 would receive a Pass but could not take the next course in the sequence without intensive remedial work.

Pass/Fail Process

Students may take one course pass/fail per semester and have at least four courses that are assessed with grades. Students may elect to take a course P/F up through the end of the first progress period. Students must request to take a course P/F from the appropriate department chair and also get approval from the College Counseling Office and the Dean of Academic Life.

COMMUNITY SERVICE

Students must complete 60 hours of approved service at no more than two locations. At least 20 hours must be completed by the beginning of junior year.

The 60-hour community-service requirement must be completed and submitted to the Community Service office by September of senior year.

ADVANCED PLACEMENT (AP) COURSES

GDS will phase out AP classes over the course of the next three years. We have committed to ending classes with the AP designation by 2022. No changes to our current curriculum will be made for the 2019-20 school year.

Courses designated as Advanced Placement (AP) conform to the guidelines set forth in AP course descriptions prepared by the College Board. Departmental faculty and academic advisors work closely with students to determine if an AP level course is the right fit for each student's goals and strengths. We ask that students and parents be particularly sensitive to the demands that an AP course requires and understand that students are committing themselves to working at a college level. Students are expected to complete the AP curriculum and to take the AP exam.

Students taking three AP courses in a given year need only one additional academic course to satisfy minimum course load requirements. Students taking four AP courses in a given year may do so only with the approval of the Dean of Academic Life, and, if approved, will be considered as satisfying the minimum course load. Students enrolling in an AP course must pay the exam fee charged by the College Board. Students who receive financial aid from GDS should see the HS AP test coordinator, Kelly Morris, during AP test registration.

LIBRARY • INFORMATION AND LITERACY SKILLS

The GDS library program supports the curricular mission of GDS by providing print and online collections, managing welcoming library spaces, encouraging exploration of identity via interactions with media, supporting independent reading and individualized learning, and teaching information skills. In the High School, the librarian teaches students effective research skills and information-finding strategies, including efficient searching, critical evaluation of sources, and ethical and responsible use of intellectual property. This occurs through project planning with other departments, co-teaching within classrooms, stand-alone lessons, reference interactions, and individualized instruction. The library is available for reference, research, and readers' advisory for the entire community, encouraging lifelong habits of library use to prepare our students for life beyond GDS.



NINTH GRADE SEMINAR

Diversity and Equity: The Intersections of Identity

The 9th grade seminar will focus on identity and points of connections within groups. The start of high school is a key time to examine identity and how it reflects personal as well as community values. Building a campus culture that embodies equity, inclusion, and engagement is essential for equipping today's students with the knowledge and skills necessary to successfully and compassionately address the increasingly complex challenges of our global society.

SENIOR QUEST

All seniors participate in a Quest, or investigation, in which they apply their curiosity, talents, interests, skills, and knowledge to a question, task, creation, or issue of relevance to the student in particular as well as to a significant constituency outside of the GDS community. Quests call for teamwork, a multi-disciplinary approach, community involvement, demonstrable social value, and presentation and communication skills. Quest proposals are due in February of senior year. Work on a Quest may begin once approval has been granted by the Senior Quest Committee, composed of GDS staff and seniors. Seniors present their Quests results to parents, staff, and invited guests at the Senior Quest Night in late May.

NOTE ABOUT THE 2020-21 ACADEMIC YEAR

Throughout the Course of Study, students will see two designations related to our changing curriculum:

1. **WILL NOT BE OFFERED AFTER 2019-20** Indicates courses that will not be offered in the 2020-21 academic year.
2. **POTENTIAL NEW COURSE OFFERING:** Indicates courses that are currently in development, along with the year it may be launched. As GDS faculty are currently working to innovate our curriculum, these courses are subject to change.

ARTS: PERFORMING

Graduation Requirement: One year of Performing Arts

THEATER

Acting I: An Introduction to Acting

This course focuses on basic techniques for the beginner. Classwork includes acting exercises and games, improvisation and scene work, monologues from classic theater, including Shakespeare and twentieth-century American drama. The

course will also touch on the history of theater, examining its components—playwriting, performance, and technical aspects—and looking at its impact on society. Students perform throughout the year in the Lunchbox Series. Requirements include an interest in theater and acting, and a commitment to learning lines.

Acting II: Advanced Introduction to Acting

Prerequisite: Permission of instructor or audition

This course covers the same techniques as Acting I, but is designed for the student who has previous acting experience and training. Material for scenes and monologues is more challenging than in Acting I; exercises and games are more sophisticated. The course also includes theater history and a consideration of its impact on society. Students perform in the Lunchbox Series, at the year-end theater showcase, and in a joint show with Directing and Theater Production students. Students are encouraged to participate in extracurricular theater.

Introduction to Theater Production

This is the ideal class for students with an interest in Design and Technology for the Performing Arts. Students learn how costume, light, sound, FX, and set design come together to enhance the story that performers are telling. In this hands-on class, students will develop construction skills such as building sets and costumes as well as technological skills such as running lights and soundboards. They will apply these skills to theater and dance performances. In the class, students will work on Fata Morgana Dance Company performances and on a joint show with Directing and Acting II students. The class will travel to live performances of theater and dance in the area. Students are encouraged, but not required, to work on after-school performances.

Directing for the Stage

Prerequisite: One course from the GDS High School Performing Arts Department and permission of instructor

This course for the advanced theater student concentrates on the vision and the methods of significant directors of American, European, and Japanese theater, including Stanislavsky, Meyerhold, G.B. Shaw, Peter Brook, Suzuki, Joseph Papp, and Craig Wolfe. Plays studied include those from the classical repertoire, including Shakespeare, Chekhov, and Brecht, as well as contemporary works by recognized playwrights such as Mamet, Fugard, McNally, and N. Shange. Students study the theatrical values in Ancient Greek theater. Students both direct and act in each other's projects and direct designers and



actors from other classes in the department. Student work is performed in the Lunchbox Series and the spring theater arts showcase. Instructors include a director, acting coaches, and a variety of guest artists. This course is recommended for students who wish to direct a show in the Winter One-Acts series. Students attend several professional productions.

DANCE

Dance I

This course is designed for students without previous dance experience. Students become acquainted with basic technique in ballet, contemporary, and theater dance, including jazz, tap, and ballroom dancing. Exposure to these techniques develops physical and artistic awareness, as well as physical and mental discipline. Students will also learn dance fundamentals, such as terminology, placement, and strength. Students will study dance history and dance criticism.

Dance I.5 **NEW**

Prerequisite: At least one year of dance training in any style

This course is for Beginning II level dancers. Students will develop technique in ballet, jazz, tap, contemporary, theater dance, ballroom, and international dance. Students will learn dance fundamentals and dance history as in Dance I.

Dance II

Prerequisite: At least one recent year of consistent ballet training

This course is for Advanced Beginning level dancers. Dancers will continue to study ballet, as well as jazz, tap, hip hop, and ballroom dancing. Students will learn fundamentals and dance history as in Dance I and I.5. Students will perform in the Lunchbox Series.

Dance III: Dance in the 21st Century

Prerequisite: At least two recent years of consistent ballet training

This course for Intermediate/Advanced Dancers will bridge the gap between classical technique and the world of commercial dance in order to prepare students for diverse careers on stage and in the entertainment industry. Students will continue to study ballet, jazz, and tap, as well as contemporary dance, theater dance, and aerial work. Students will also learn about the the business of a dancer's career, including contracts, unions, auditions, resumes, and marketing, and explore dance management careers.

Dance for Musical Theater I

Designed for students without previous dance experience, this course introduces students to the styles of dance that make

up American musical theater: ballet, jazz, modern, ballroom, and tap. Each style is approached through a particular musical. Students study and emulate the great choreographers, Bob Fosse, Agnes DeMille, Twyla Tharp, Jerome Robbins, and more; and learn to choreograph, as well as dance, in those styles. This course is recommended for students wishing to audition for the HS Spring Musical. Students will perform in the Lunchbox series.

Dance for Musical Theater II

Prerequisite: Audition or permission of instructor

The curriculum in this course is similar to Musical Theater I, but at a more advanced level. Students explore the history of the American musical and its impact on our culture. Students learn audition techniques through simulations of Broadway musical auditions. This course is recommended for students wishing to audition for the HS Spring Musical.

MUSIC

Music Theory and Composition

Prerequisite: One course from the GDS HS Performing Arts Department and permission of instructor

In this course students will learn the rudiments of musical structure and form. Topics include sound and notation, rhythm, melodic writing, ear training, and chord progressions. In addition to these theoretical concepts, student will work with the compositional elements of orchestration, balance in structure, motivic development, and setting text to music. Students will also learn keyboard technique. Students will present their arrangements and compositions at public performances.

VOCAL MUSIC

Vocal Technique

Prerequisite: Ability to match pitch

Open to all: beginning, intermediate, and advanced singers. Over the course of the year, students will learn to manage their breathing, form beautiful vowels, and engage their whole bodies to produce a pure and rich sound. They will learn to turn a musical score into sound—to sight-read. The repertoire ranges from ancient to modern, and examines music from many cultures. Students in the this class will be encouraged to join GDS Singers. This class is a perfect opportunity to meet other students who love to sing.



GDS Singers

Meets Wednesday evenings, 6:00-8:30 p.m., with dinner provided for small fee.

Does NOT fulfill the Performing Arts course requirement.

Open to all students. Over the course of the year, students will sing four-part harmony and learn breathing exercises, warm-ups, posture/position, and basic sight reading skills of an octavo score. GDS Singers is the 100-Voice Choir at the High School that performs at the National Cathedral, Christmas Assembly, and Passover Seder. Attire for Concerts: Students will rent from GDS tux/gown attire.

Touring Chamber Choir

Prerequisite: Audition/Permission of the Instructor.

Chamber Choir is the premiere performance choir for GDS; the Choir travels nationally and internationally in alternating years. This curriculum includes music from early Renaissance to Contemporary Choral settings. This course focuses on intermediate music reading, music theory, music appreciation, and some form and analysis. The course is designed for soloists, a cappella leadership students, and section leaders in voice parts. Included are performance tours and a rigorous concert schedule, which includes participation in GDS Singers at the final rehearsal and concert of each semester.

INSTRUMENTAL MUSIC

Jazz Improvisation and Creative Music Lab (Beginning Level)

Jazz Improvisation Lab is open to all students of any instrument. The Lab provides answers to the question, “What do I play?” when asked to improvise. The course develops instrumental technique, as well as a foundation in music theory. Activities in class include reading notated music, playing by ear, improvising, and learning to read chord progressions and notation. The course includes opportunities to perform on and off campus throughout the year.

Jazz and Creative Music Chamber Ensemble (Advanced Levels II-IV)

Prerequisite: Jazz Improvisation. Open by audition or permission of instructor.

Jazz Chamber Ensemble is an advanced-level jazz ensemble for mixed instruments. Improvisation, written music, and ear-training/theory are incorporated into the creation and performance of arrangements of music from the standard jazz repertoire and creative music. Students will participate in several performances through the year on and off campus. Jazz Chamber Ensemble and Jazz Ensemble-Big Band will combine for special events and repertoire presentations.

Jazz Ensemble-Big Band (Advanced Levels II-IV)

Prerequisite: Jazz Improvisation. Open by audition or permission of instructor.

The Jazz Ensemble is a classic big band (reeds, trombones, trumpets, guitar, piano, bass, drums) as well as other instruments (flute, clarinet, vibraphone, violin, etc.) performing music from the Swing Era and beyond. Written music, “head” arrangements, improvisation, and more culminate in performances with concerts of music by Duke Ellington, Count Basie, Sun Ra, and contemporary big band composers. Students will participate in several performances throughout the year on and off campus. Jazz Chamber Ensemble and Jazz Ensemble-Big Band will combine for special events and repertoire presentations.

Honors Jazz and Improvisation Ensemble NEW

Prerequisite: Permission of instructor

This course focuses on repertoire for small groups and on improvisation techniques. Students will hone skills acquired in previous jazz courses. Arranging, theory, and the business of making music will be explored in order to give the students a fuller picture of a music career. Students will record, tour, and participate in competitions and festivals.



ARTS: STUDIO

Graduation Requirement: One year of Studio Art

The studio art department offers a comprehensive curriculum that fosters skills and creativity in a variety of media. Students may begin their study of art in ceramics/sculpture, photography, drawing/painting, graphic design, or film and video. Advanced courses are available once students have completed a first year in a specific course. Students are advised to begin their study of art in 9th or 10th grade in order to meet the requirement for graduation and to allow time for advanced study for those inclined. The curriculum emphasizes the principles of design and complements these skills with research projects including museum visits and historical and contemporary artist studies.

Introduction to Ceramics & Sculpture

This course introduces students to a range of three-dimensional media, with a strong emphasis on wheel-thrown pottery. Students learn how to prepare clay, use a variety of glazes, and successfully operate a pottery wheel. During the first semester, students complete a broad range of wheel-thrown vessels while in the second semester the course focuses on a more hand-built and sculptural approach to form. Work will be completed using clay, plaster, plastic, wood, paper, and found objects. Projects will range from realism to abstraction. Students electing this class should expect to get messy and be challenged to be resourceful and imaginative in their art-making.

Advanced Ceramics & Sculpture

Prerequisite: Introduction to Ceramics and Sculpture

Advanced Ceramics and Sculpture is for students who are exceptionally motivated and work well independently. Although not specifically an AP course, students may elect to focus their work on preparation of an AP three-dimensional design portfolio. Students will work directly with concepts of design and articulate artwork that clearly reflects an understanding of these principles. In addition to refining skills and building their craft as potters, students will tackle more challenging assignments in sculpture. The objective will be to help students learn to articulate a cohesive vision, while producing engaging artwork.

Introduction to Drawing & Painting

This introductory drawing and painting course offers training in basic and advanced techniques of drawing, painting, and composition. Students work in a variety of genres that

challenge them to see more analytically while gradually expanding their repertoire of skills. Each student works toward building a portfolio of artwork that meets the criteria for advanced course work and reflects his or her unique vision.

Advanced Drawing & Painting

Prerequisite: Introduction to Drawing and Painting

Advanced Drawing and Painting is for highly motivated students who want to further their studies in painting and drawing as well as prepare for the AP Studio Art course. Projects designed to help students develop their technical skills include landscape drawing, still life oil painting, figure drawing, architectural drawing, digital drawing, portrait drawing, and anatomical studies using the skeleton. Students learn to use a variety of media and develop a personal artistic voice. The structure of the course helps students prepare a well-developed portfolio.

Introduction to Fine Art Photography

This course provides a comprehensive experience in current photographic processes. It introduces students to the technical and visual processes of photography. Students examine how digital technology has transformed photography from a medium of absolute record to one of limitless manipulation of digital images with Adobe Photoshop. Assignments initially stress the essentials of the photographic process and then shift toward fostering an understanding of the expressive elements of the medium. Students follow an introductory photography curriculum that covers both technical and aesthetic aspects of this rapidly evolving medium using digital cameras in conjunction with the computer programs Adobe Photoshop and Lightroom. Students learn the essential principles of composition and design while exploring classic photographic subjects such as architecture, still life, portraiture, landscape, and social documentary. In addition, an art history research project requirement focuses on prominent photographers. Each student is expected to develop a portfolio that meets assignment objectives and demonstrates technical competence. Students should supply their own digital cameras and memory cards.

Advanced Photography

Prerequisite: A digital or black-and-white photography course

Through a series of portfolio-building assignments, advanced photography students continue their creative, visual, and technical inquiry into traditional and/or color digital camera operation. There is a strong emphasis on the photograph both as fine art and as an interrelated extension of the students'



interests and perceptions. Advanced metering, studio lighting, alternative printing techniques, Lightroom, and Adobe Photoshop manipulations are taught. Initially assignments stress the essentials of the photographic process, however as the year progresses students gain an understanding of the expressive elements of the medium. Students are expected to build a comprehensive portfolio in addition to designing and hanging an exhibition for the community. Students should supply their own digital cameras and memory cards.

Digital Media & Design

Students will learn to create magazines, CD covers, game covers, posters, logos, infographics, and web design using Adobe Photoshop, Illustrator, and InDesign. Students will also learn how to develop a concept, work with typography, create digital graphics, and manipulate photos.

Making Video in the 21st Century

This introductory course takes a whole new approach to creating video as works of art, combining a variety of art forms (including film, painting, sculpture, photography, and performance) with the use of mobile phones, apps, and digital cameras for creating and capturing content. Students will exhibit hands-on art projects with sound and learn the basic production methods of shooting and editing with Final Cut Pro and Adobe Premiere. Students will take field trips to museum exhibitions, watch movie screenings of current shorts and features, and discover ground-breaking art from the 1930s to the present, from such artists as Man Ray, Andy Warhol, Nam June Paik, and Marina Abramovic. Presentation of class projects will be tailored to reflect specific interests of each student. Projects may include video installations, multi-media sculpture, or performance art works.

AP Studio Art

Note: AP Studio Art is designed as a one-year program

Prerequisite: Successful completion of Advanced Painting and Drawing

AP Studio Art is a one-year intensive portfolio-based course designed for students seriously interested in art beyond the intermediate level. It is a rigorous college-level curriculum offered in a supportive high-school environment. Students need to be self-motivated and serious about following through on assignments in order to have a successful experience and to be properly prepared for the AP examination, which is an extensive portfolio submission. A highlight of the course is the intellectually charged and technically challenging atmosphere

in which students explore their own work, as well as that of classmates and professional artists. The course of study is based on the College Board requirements and successful completion of a portfolio for the AP examination.

AP Studio Art: Photography/2-D Design

Prerequisite: A digital or black-and-white Advanced Photography course

AP Studio Art is a one-year intensive portfolio-based course designed for students seriously interested in photography as design beyond the intermediate level. It is a rigorous college-level curriculum offered in a supportive high-school environment. Students need to be self-motivated and serious about following through on assignments in order to have a successful experience and to be properly prepared for the AP examination, which is an extensive portfolio submission. A highlight of the course is the intellectually charged and technically challenging atmosphere in which students explore their own work, as well as that of classmates and professional artists. In addition students will study historical and contemporary artists through gallery visits and research throughout the year. A complete description of the course's expectations is available on the College Board website.

AP Studio Art: Ceramics and Sculpture/3-D Design

Prerequisite: Successful completion of Advanced Ceramics and Sculpture

AP 3-D Design is a one-year intensive portfolio-based course designed for students seriously interested in ceramics and sculpture beyond the intermediate level. It is a rigorous college-level curriculum offered in a supportive high school environment. Students need to be self-motivated and serious about following through on assignments in order to have a successful experience. The objective of the course is to guide each student to create an original portfolio of artwork that meets the standards set by the College Board. Students should expect to be challenged to develop their skills to the highest level and defend their work and ideas during critiques. Assignments will directly address the key principles of design and are geared to building work for each student's portfolio. A complete description of the course's specific portfolio expectations is available on the College Board website.



COMMUNITY SERVICE

Graduation Requirement: Students must complete a minimum of 60 hours of approved service at no more than two locations.

At least 20 hours must be completed by September of junior year. The 60-hour community service requirement must be completed and turned in to the Community Service office by September of senior year.

No more than 40 hours earned on a service trip, camp, or experience elsewhere will count towards the requirement.

Community Service at GDS

Community service has been a bedrock of GDS's educational mission since the school's founding. We firmly believe that independent community service helps prepare GDS students for life. Students who interact within and outside of their communities, who have engaged with—and learned about—a variety of individuals, and who have had to think critically about real-world problems, leave GDS prepared for the 21st century with better communication and collaboration skills, an ability to think creatively about the world's challenges, and tools that empower them to address the systemic inequities that exist in the world.

Independent Service Guidelines

Community service must be:

- Approved before service begins
- Completed at one or two established nonprofit organizations
- Free to and provide direct contact with the organization's clients
- Local and free to the student
- Focused on social justice and increasing equity of opportunities, rights, and resources for all
- Unpaid
- Unique to this requirement (the service must be done for this requirement and not also applied for a scout project, court ordered, or for another organization), and
- Supervised by someone unrelated to the student

Students must submit an evaluation form and meet with their advisors to reflect on their experiences to receive service-hour credit. Complete guidelines are available at www.gds.org/Page/Academics/Community-Service.

GDS Student-Led Community Service Clubs

GDS students find participation in student-led community service clubs particularly rewarding. Students can receive community service credit for ongoing involvement in a service club. Current service clubs include teaching and tutoring, environmental work, and informal mentoring through arts instruction. See www.GDS.org/HSCommunityService for details about clubs and opportunities.

Service Learning at GDS

Service Learning is an integral and transformative part of every GDS student's education. GDS uses a combination of instruction, service, real-world collaboration, and reflection to inspire students to become fully engaged citizens in diverse communities. With the support and encouragement of the administration, teachers in all departments are working actively to explore ways to incorporate service directly into the curriculum.



ENGLISH

Graduation Requirement: Four years of assigned English

It is in the shared encounter with great literature that we reflect on our deepest humanity, discover our most inventive thinking, and hone our powers of articulation (both written and spoken) in order to participate in the most crucial conversations about the world and our place in it.

English 9

English 9 serves as an introduction to literature and composition. Common texts include selections from the Book of Genesis, *Gilgamesh*, Hurston's *Their Eyes Were Watching God*, Yang's *American Born Chinese*, and a Shakespeare play: *Romeo and Juliet* or *A Midsummer Night's Dream*. Individual teachers supplement these texts with works of their own choosing, including Foer's *Extremely Loud and Incredibly Close*, Cisneros's *The House on Mango Street*, and Brontë's *Jane Eyre*. English 9 texts focus on journeys—both metaphorical and physical—in which the protagonists adolcesce as they struggle toward the formation of tested and tempered identities. The readings and discussions introduce students to basic literary concepts pertaining to epic, dramatic, and narrative forms. Class discussion generally focuses on the assigned reading and emphasizes the interdependence of close attention to textual detail and sound interpretive generalization.

Students write poems, stories, tests, and extended critical essays all of which constitute “major assignments”—but the abiding focus of the writing project is the five-paragraph essay. Beginning with single paragraphs in response to relatively narrow writing prompts, students are guided toward an essay whose thesis unfolds like a short, discursive sonata. The format enables students to present a long thought in an efficient and logically satisfying array. Once students have mastered this paradigm—and have felt the momentum that coherent and efficient presentation can give to their thinking—this model can guide them to more sophisticated argumentative designs. Along with the writing project, there is a good deal of grammar instruction. Formal grammar lessons are reinforced by teachers' extensive notations in the margins of student compositions and by one-on-one meetings with students as they plan revisions. Teachers work to deliver their students to 10th grade with a firm grasp of the mechanics of strong writing, together with an alertness to the accent of mature prose.

English 10

In the readings and discussions of English 10, we carry the ninth-grade theme of identity formation into more problematic terrain attending to the ways in which identity can be compromised by its social and cultural context. We also pay more attention to intertextuality, to the ways in which parallels and symmetries between texts—even texts so far afield that they could not have influenced each other—can open rich, interpretive terrain. Reflecting this new level of complexity in text and discussion, the writing project of English 10 tackles increasingly complex issues of form in both analytical and creative writing. Analytical essays move beyond the boundaries of the five-paragraph essay to explore diverse argumentative forms that respond organically and nimbly to the textual issues at hand. Creative writing becomes increasingly investigative of and responsive to the literary work being studied, while still honoring the student's powerfully individual writing voice.

Our shared texts are the Gospel According to Mark, Morrison's *Song of Solomon*, Fitzgerald's *The Great Gatsby*, Smith's *Life on Mars*, Lahiri's *Interpreter of Maladies*, English Romantic Poetry, and Baldwin's *Giovanni's Room*. These are supplemented by a variety of texts chosen by individual teachers, with a particular emphasis on texts with female protagonists. These might include Barry's *One Hundred Demons*, Moore's *Who Will Run the Frog Hospital?*, and Alderman's *Disobedience*.

English 11

The first semester of English 11 is a writing course that we call “Argument.” Our shared texts are the Declaration of Independence, Thoreau's “Civil Disobedience,” King's “Letter from Birmingham Jail,” Morrison's *Playing in the Dark*, the Declaration of Sentiments, the Alcatraz Proclamation, “Woman-Identified Woman,” and essays by bell hooks. Other texts might include Baldwin's *The Fire Next Time* and Chisholm's “Equal Rights for Women.” These are supplemented by a wide variety of readings on contemporary issues of the day—for instance, transgender rights, immigration, and the criminal justice system—along with some classical models of persuasive discourse, all chosen to bring the students' argumentative skills into contact with questions beyond our standard literary topics. In the readings and in discussion, there is a strong focus on issues of social justice, and on the logical skills and habits of mind that enable one to take well-grounded and effective stands in the conversations that shape our national life.



The second semester focuses on the figuration of American identity in American poetry and fiction. Our shared texts include poems by Walt Whitman, Emily Dickinson, and Elizabeth Bishop; short stories by Nathaniel Hawthorne, and Edgar Allan Poe; and three longer texts: Jacobs' *Incidents in the Life of a Slave Girl*, Melville's *Benito Cereno*, and lè's *The Gangster We Are All Looking For*. Additional texts might include Bennett's *The Sobbing School* and Orange's *There There*.

English 12

English 12 serves as the culminating experience of a student's progress through the GDS English curriculum. Common texts include Shakespeare's *Hamlet*, Aeschylus' *Agamemnon*, Fornés's *Fefu and Her Friends*, Morrison's *Beloved*, and a Faulkner novel: *The Sound and the Fury* or *As I Lay Dying*. These are supplemented by such texts as Brontë's *Wuthering Heights*, the graphic-novel version of Auster's *City of Glass*, Smith's *White Teeth*, and Rankine's *Citizen*. These texts are chosen for the richness and intensity of their disruptions and for the ways in which they challenge their protagonists to find some sort of decency and fulfillment in worlds where the moral compass seems to be spinning, but also for the ways in which they challenge the students to find interpretations sufficiently capacious and stable to honor the scope and integrity of the works.

The writing assignments include both creative and critical responses to the reading. Following the trajectory of the three previous courses, they hold the students to high standards while giving them room for aspiration and self-expression. While students are reading Faulkner, for instance, and studying the signature Modernist technique of "stream of consciousness" narrative, they're asked to write narratives of their own in which they attempt to capture the deflected monologue of a mind guided by surprise, both expressing and taking in the converging streams of sensation and reflection. Literary analysis, however, continues to be the course's center of gravity and a realm of particular growth. In class, students focus intensely on the page, with a view to stirring up interpretive possibilities to be explored in the writing, where audacity and originality are encouraged and acknowledged, even as we continue to reinforce the protocols of lucid, logically coherent, and intellectually responsible prose.

The final writing assignment is the Senior Paper. The paper is a work of original critical inquiry on a text not included in the English 12 curriculum. The project, a sustained act of "guided autonomy," gets under way in March with a proposal naming

the text to be studied and stating the questions that will guide the student's reading and thinking. The writing begins in earnest after Spring Break. Regular classes convene less often, and students meet at least once a week with their teachers to present their work in progress, meeting internal deadlines, until the final draft arrives on the teacher's desk the last day of Senior classes.

JUNIOR AND SENIOR LITERATURE ELECTIVES

The following electives are offered both semesters. Students may take these courses as a semester course in the fall or in the spring or as a yearlong literature elective as available. (Literature offerings may change from year to year.)

Public Speaking

To inform, to persuade, to refute, to inspire: these are a few reasons why speakers stand behind a podium, in front of a class, at a board meeting, or to kick off a celebration. In this course, we will experiment with different kinds of speech writing as well as with different kinds of delivery. Each class will include practical strategies for writing as well as for speaking in a variety of settings. We will practice delivering written and impromptu speeches, consider presentation aids and how to work successfully with a microphone, learn to analyze an audience, and more—skills that will support your work in every class and any discipline. Supporting texts will include readings from classical oratory manuals to historic and contemporary speeches, lectures, and TedTalks.

Contemporary Women's Literature

"I write hungry sentences," says poet Natalie Diaz. "They want more and more lyricism and imagery to satisfy them." All of the works we'll read in this course share this hunger for beauty and power in their language, as Diaz describes her poems' hunger. Equally important, our books share an appetite that looks up off the page and at the world around us. These books are hungry to disrupt authority, challenge presumptions, and unsettle truths—authority, presumptions, and truths predicated on (mis) conceptions of gender as it intersects with class, race, ethnicity, religion, sexuality. Our work—our joy—will be to sit at the table with these hungry texts.

The syllabus may include work from the following: *Salvage the Bones* (Jesmyn Ward); *Another Brooklyn* (Jacqueline Woodson); *Dry Land* (Ruby Rae Spiegel); *Department of Speculation* (Jenny Offill); *A Visit from the Goon Squad* (Jennifer Egan); *Nevada* (Imogene Binnie); *The Diving Pool* (Yoko Ogawa); *Bright Dead Things* (Ada Limón); *When My Brother Was an Aztec* (Natalie



Diaz); *It Is Daylight* (Arda Collins); *Marlena* (Julie Buntin); and *Sour Heart* (Jenny Zhang).

The Age of Shakespeare

Although this course concentrates on Elizabethan and early seventeenth-century culture, society, theater, and the works of Shakespeare (approximately ten plays and some sonnets), there may be additional readings from the works of poets and dramatists immediately preceding the Shakespearean era.

Creative Writing (Not offered in 2019-20)

Creative Writing is an elective which, on some days, will look like other literature classes, with focused and searching discussions of iconic texts, but most days will be a workshop for young poets, playwrights, and storytellers. We will be writing frequently, but each of the writing assignments will begin with reading. Our texts will be *The Norton Anthology of Poetry*, drama and short fiction anthologies that will vary from year to year, and several anthologies of short plays where we will find models, thematic cues, and a tradition of English poetry, drama, and fiction that we can't help but join, and modify by our own contributions to it. In this class, however, we'll try to be particularly mindful of the ways in which the work we're doing relates to the work of artists who have written before us. Writing will be due every week or so, which should give us time to read and discuss each other's work in class, and at the end of the semester each student will submit a portfolio of finished work that reflects in some integral way the student's response to the notes she has received on work in progress, but also reflects the student's own developing taste and artistic motives. (In each semester, we'll be exploring different genres. The emphasis of the first semester will be poetry. The emphasis of the second semester will be playwriting.)

HISTORY AND SOCIAL SCIENCES

Graduation Requirement: 9th Grade: Communities and Change; 10th Grade: European History, African History, or World History; 11th Grade: U.S. History, AP U.S. History, or American Studies

The GDS History and Social Science Department seeks to foster a healthy sense of inquiry, empathy, and scholarship in students as they explore diverse historical, economic, and political developments, along with individuals, movements, and cultures, across the spectrum of the department's various disciplines. Students will develop the ability to think, speak, write, analyze, and research (all assessed in a variety of ways) that will help them succeed after graduation as local and global citizens and lifelong learners.

History 9: Communities and Change

This dynamic course allows students to actually “do” history as they develop key skills in historical analysis, writing, and research and confront the challenges of applying historical concepts to the world around them in a variety of ways. Students begin by examining the communities that comprise and surround Washington, DC, using historical records, archival newspapers, oral histories, and other sources to explore long-held assumptions and little known facts about life in the nation's capital. Questions regarding politics and socioeconomics, race and ethnicity, and continuity and change will be explored as students learn to extract, synthesize, and analyze information in order to come up with conclusions about historical patterns and processes. In the second semester, students move to the wider world as they examine current global conflicts starting with an analysis of the post-9/11 world and examining current effects of conflicts globally and among immigrants locally who are affected by them.

Throughout the year, students will produce regular research and position papers and comparative essays; they will have the opportunity to engage in discussion and debates about current events and their connections to those of the past.

European History (Grade 10)

This survey course examines the political, social, and ideological changes in Europe from the Renaissance to the modern era. In addition, the course provides practice in historical analysis through formal writing, research, debate, discussion, and a host of other activities. Topics include the



Renaissance and Reformation, the Age of Exploration, the Scientific Revolution, the development of absolute monarchies, the rise of nation states, the Enlightenment and the French Revolution, nationalism, imperialism, industrialization, the two World Wars, the Cold War, and the rise of the European Union. The course emphasizes the importance of how perspectives on the past should be understood because of their continuing role in influencing the present.

World History (Grade 10)

This dynamic course provides students with a wide-ranging look at the history of the world, focusing on the lived experience of individuals and groups in a variety of settings. Beginning with notions of power and developing webs of relationships and ending with modern expressions of action and agency in response to both internal and external pressure, the course allows students to actively engage with a variety of sources as they develop understandings of the ways that history manifests politically, economically, and culturally in different settings. Students will employ case studies in order to develop understandings of both commonalities as well as distinct and singular developments throughout the world, exploring routes of engagement as well as agency and action within specific societies. Throughout the course, students will engage in activities designed to develop skills in researching and using evidence to support their ideas, use available technology to present their understanding, and build key competencies in historical writing and thinking.

African History (Grade 10)

This survey history course will investigate all corners of Africa. The course begins with an exploration of Africa as the cradle of civilization, as we examine early humans and new developments in that field. Issues of ethnicity and race emerge in an examination of ancient Egypt and Nubia, along with the ways that western historians have chosen to spin the histories of these civilizations. Much of the course is concerned with Africa's history before the arrival of Europeans, and the arc of Africa's great kingdoms and the variety of political, religious, and economic life across the range of the continent is explored through discussion, debate, inquiry activities, and research. The second half of the year examines the impact of the European incursion, colonialism, and the struggle for independence. Special focus will be given to the social-cultural, political, and economic transformations that occurred in Africa during this time. As they move from topic to topic, students engage with the material in a variety of ways, using literature, art, and music along with primary and secondary sources to develop their active understanding of content and context.

U.S. History (Grade 11)

U.S. History is designed to familiarize students with the important people, places, and movements in American history as well as to acquaint them with changing historical interpretations. In addition, the course is designed to sharpen skills in essay and research writing through a variety of activities, including discussion, debate, and analysis of primary sources and other historical documents. Above all, our goal is to impart a love of history that we hope will last a lifetime.

AP U.S. History (Grade 11) **WILL NOT BE OFFERED AFTER 2020-21**

This survey course, which begins with the pre-Columbian world and ends with the Obama presidency, allows students to explore U.S. History through the vantage point of primary sources and the lens of historiography. Nightly readings in Eric Foner's *Give Me Liberty* are supplemented with articles and documents so that students come away not only with knowledge of political and social history, but also a real sense of how, and sometimes why, history is written. Students should be prepared for extensive reading and additional homework, and should be ready to take the demanding AP exam at the end of the year.

American Studies (Grade 11) (Gender or Immigration focus)

This interdisciplinary American Studies course offers students an opportunity to explore American history with different lenses from the colonial period through to the 20th century. The Focus on Immigration theme will allow students to examine and analyze the experiences of Americans from a variety of backgrounds while exploring continuities and changes in immigration policy over time. Concepts include race and ethnic-based policies; international and national contexts; the politics of immigration, assimilation, acculturation, and ethnic identity; and the social construction of race and ethnicity. The Focus on Gender theme brings together women's and feminist studies, men's and masculinity studies, and LGBT/Queer studies to explore different representations of gender in American history over time. Students will work to understand critical gender theory along with the development of institutionalized approaches to gender. This course fulfills the 11th grade U.S. History requirement.

U.S. Political History (Grade 11) **NEW**

This course will focus on the historical development of our current political system and how our institutions and political practices have changed since Colonial times. This examination will include the development of our system of political parties; how and why the right to vote has expanded; changing roles and expectations of and for the Presidency and Congress; some basic constitutional law including major Supreme Court



decisions and their implications; and the changing role of the media and public interest groups and lobbyists as political influencers. Students will complete profiles, projects, analyses on all of these topics and there will be much discussion of current political issues.

ELECTIVES IN HISTORY

The following courses have been designed to allow students to explore select topics in greater depth than can be covered in the required courses. Electives are open to juniors and seniors with the exception of AP Psychology, which is reserved for seniors.

YEARLONG ELECTIVE

AP Psychology (Grade 12) **WILL NOT BE OFFERED AFTER 2019-20**

Psychology is the scientific study of mental processes and behavior. It is a broad field that explores a variety of questions about thoughts, feelings, and actions. Using a college-level text, students examine the history of psychology, review psychological methods, and investigate areas such as motivation and emotion, perception, cognition, learning, and abnormal psychology.

SEMESTER ELECTIVES

American Civil War (Fall)

The course will explore the war to end slavery from a variety of perspectives—social and political as well as military—to help seminar participants evaluate how and why the war came, how and why it was fought in the manner in which it was, and how and why the war continues to be a “living” conflict in American culture, society, and politics. Students will explore military history in a broad sense to note not just the tactical and strategic movements of soldiers but also the larger contexts of social and political history that motivated those soldiers’ collective decisions to fight. To that end, the class will focus on seminar-style discussion of primary and secondary sources and culminate in a research project that incorporates scholarly research in both primary and secondary source materials. Hands-on activities will include seminar discussion, primary source research, walking tours of DC’s circle forts, a visit to a Civil War battlefield, and a trip to the Smithsonian Institution’s military history exhibit.

Contemporary Issues (Spring)

This course, the first to be proposed and designed primarily by students, allows juniors and seniors to engage with contemporary issues through a variety of critical lenses. Using the range of available media and through the creation of a bimonthly online interactive journal that analyzes emergent

issues in depth, students will gain a better understanding of events as they occur at the local, national, and international levels and a better appreciation of the connection between past and present. Collaborative teaming, discussion and debate, and media literacy provide consistent structures for a course whose content will reflect the ever-changing news landscape and national discussion. Further, the bimonthly journal will provide additional content for the second-semester 9th grade history course, which focuses on the experiences and challenges of international immigrants to the greater Washington area and the recent history of their places of origin, including Africa, the Middle East, Asia, and Latin America.

Cultural Anthropology (Spring)

Cultural Anthropology considers the nature of culture through customs and beliefs including language, subsistence, families and kinship, religious beliefs, and art in non-Western societies. The second half of the course concentrates on a number of American subcultures, such as religious cults, ethnic or racial groups, and regional subcultures. Choices of subcultures will be based on class interest. Students also have the opportunity to examine specialized monographs and articles as well as to develop non-library research projects.

From Freedom Rides to Ferguson: Civil Rights in America (Spring)

The first half of the course will focus on the history of the Civil Rights movement in the 1960s. Topics will include: the Freedom Rides of 1961; the integration of the University of Alabama and University of Mississippi; the Birmingham Children’s Crusade of 1963; the March on Washington in August 1963; Mississippi voter registration drives (1962–65); the historic march from Selma to Montgomery in March 1965 and events leading up to it; passage of the Civil Rights Act of 1964 and the Voting Rights Act of 1965; and the Black Power movement. The second half of the course will focus on current civil rights issues. Depending on the interest of the students, we will select topics from the following: police use of deadly force in dealing with persons of color; racial disparity in policing activities more generally; racial disparity in the criminal justice system, including particularly the administration of the death penalty; recent attempts by various states to impose voting restrictions; the Supreme Court’s invalidation of Section 4 of the Voting Rights Act of 1965; use of affirmative-action policies in educational institutions; or the increasing segregation of public schools.

Most importantly, this course is intended to provide students with much more than a merely academic view of the civil rights



battles of the mid-20th Century. We hope that it will inspire students to continue to advocate for civil rights and social justice throughout their lifetime in whatever way most aligns with their principles, values, and interests.

Introduction to Economics (Fall)

This course covers the basics of economics, including the micro-foundations of consumer behavior and allocating scarce resources as well as the macro-level of complex market interactions in an economy such as that of the United States. Significant components of the American economy, such as the stock market, get special attention. Students also examine economic development in nations where “normal” rules of the marketplace may not completely apply.

Gender Studies (Fall)

This class introduces students to the complex interdisciplinary field that is gender studies today, bringing together women’s and feminist studies, men’s and masculinity studies, and LGBT/Queer studies. While primarily U.S.-based, the course will explore how different definitions and representations of gender and sexuality spread via immigration and media. The goal of the class is to explore key concepts in gender studies through the lens of critical theory, to understand the ways in which critical theorists have engaged, critiqued, and developed the work of other philosophers, and to build understanding of how these philosophies connect to the students’ own lives. Topics include the debate between nature versus nurture, feminism, masculinity, gender-based violence, and social institutions such as family, education, sport, and religion.

Law & Constitutional Rights (Spring)

This course is designed to give students a sampling of the meaning, operation, and significance of law in recent American history and government. We begin the course with a full-length case study of a legal issue as it makes its way to the U.S. Supreme Court. Thereafter, we focus on various aspects of American law (depending, in part, on the interests of the students). Topics covered in the past include criminal law, the law of search and seizure, and the rights and legal protections of various minorities. In each case, our purpose is to learn substantive law in that area and understand how it develops through precedent and legislation. Main ideas in the philosophy of law may also be covered. Finally, we engage in a simulation—perhaps a mock trial or moot court—in order both to expand our understanding of a substantive issue and to experience one aspect of the legal process.

Politics & Policy (Fall)

This course introduces students to various aspects of foreign and domestic public policy. Students learn how various aspects of the system of U.S. government affect public policy—the Congress, the Presidency, and the Courts, as well as regulatory agencies, the federal bureaucracy, and state and local governments. Students also explore the ways in which private citizens, civil society, lobbies, and non-governmental organizations affect local and international public policy. The course features field trips to think tanks. There will be special attention given to the President’s State-of-the-Union address, and there will be guest speakers on various aspects of public policy. Students engage in two major policy research projects, as well as debates, discussions, and class presentations.

The Middle East (Fall)

The course begins with an overview of the founding and spread of Islam, with some exploration of the Umayyad, Abbasid, and Ottoman Empires. Students will study the breakup of the Ottoman Empire and examine the rise of Arab nationalism and Zionism, as well as the rise to power of Shah Reza Pahlavi in Iran. The strategic and economic importance of the region is studied along with the founding of Israel; the continuing conflict among Jews, Arabs, and Christians; and the rise of Islamic fundamentalism. Particular emphasis will be placed on understanding the Arab-Israeli conflict.

The Middle East Since World War II (Spring)

The course will be based on the events that shook and shaped the greater Middle East, and include a focus on the two main themes of colonialism and nationalism. The various ideologies that grew out of these themes, such as pan-Africanism, will also be addressed.

This course will deal with a multicultural and diverse political, social, and environmental milieu. Basques, Berbers, and other ethnic groups that are frequently overlooked by mainstream courses will also be explored. Throughout the course, a variety of methods will be used to ensure that student learning styles and preferences are addressed, supported, and developed in a way to produce flexible thinkers and active writers.

World War II (Spring)

Although focused on military history, this course also asks students to consider the interplay between battlefield choice and social, political, and ethical considerations. More than just a following of the armies, this course explores how



racial and ethnic minorities and women played into “the war efforts” of various combatants on both the battle and home fronts. The goal of the course will be to create an advanced history seminar, similar to what students might experience in an honors 100- or 200-level course in college. To that end, the class will focus on seminar discussion of primary and secondary sources and culminate in a research project that incorporates scholarly research in both primary and secondary source materials. Field trips to the Udvar-Hazy center, the National Museum of American History, and the National Museum of the Holocaust will offer hands-on activities, as will seminar discussion and writing workshop of seminar papers.

AP U.S. Government & Politics (Fall) **WILL NOT BE OFFERED AFTER 2019-20**

This course is an introduction to the processes and institutions of U.S. Government: Congress, the Presidency, the federal bureaucracy, interest groups, political parties, campaigns and elections, as well as the judicial system and civil rights and liberties. In addition to the textbook, Blanco and Canon’s *American Politics Today*, there will be guest speakers and field trips, as well as readings by political scientists and journalists to provide different perspectives and theoretical underpinnings.

AP Comparative World Politics (Spring) **WILL NOT BE OFFERED AFTER 2019-20**

AP Comparative World Politics offers students an opportunity to examine international issues such as globalization, democratization, political change, public policy, and the relationship between citizens and the state using as illustrations and examples the governments of six countries: Britain, China, Iran, Mexico, Nigeria, and Russia in addition to the European Union. Much of our study of world governments focuses on current affairs. In addition, guest speakers and field trips ensure that students receive a broad range of perspectives.

POTENTIAL NEW COURSE OFFERINGS IN 2020-21

International Relations

This course involves a survey of major principles and an investigation of key topics in international relations, including security, trade, cooperation, and conflict. With a primary focus on current events as they unfold around the world, the course offers students a chance to investigate not only the key differences among nations, but to interrogate their own understandings of the world and the role the U.S. plays in its relationships with foreign nations.

Comparative Politics

Comparative Politics at GDS involves an integrated approach to political systems and structures throughout the world. The course employs the case study model to examine issues relating to power, privilege, and political structures in 8-10 countries, while making use of the rich resources available in Washington DC to drill down into these questions even further. Students produce position papers, engage in debates, and travel to think tanks and universities to experience the kind of work that is done by experts in these areas.

American Government

This course will be an introduction to the study of the American political system. It will introduce the institutional structures, political actors and constitutional debates in American government and politics. The course will begin with the constitutional underpinnings of the US political system and then discuss how the government operates in practice. By looking at current issues in the American political system, students will come to know more about the role of campaigns and elections, the influence of political parties, interest groups and the media, and the institutions of the federal government, as well as recent and longer term changes in the powers and expectations of the office of the President. The course will also examine the role of race and gender in American politics. Overall, this course will enhance students’ ability to think critically about politics, political choices, political institutions, and public policies.



INNOVATION & COMPUTER SCIENCE

Introduction to Programming (Fall & Spring)

In this one-semester, introductory computer programming course, students will develop logic, problem-solving, and programming skills using the Python and Processing languages. Students will then use this knowledge to control and work with a variety of different microcontrollers such as Raspberry Pi's and Arduinos. This course represents an awesome opportunity for students new to programming to experience computer science in a collaborative, hands-on, and fun environment. After completing this course, students will be prepared to explore other opportunities within the Computer Science department.

Robotics, Electronics, and Programming (Fall & Spring)

This is a hands-on laboratory course involving the physical construction, electronic wiring, and computer programming of robots. Students will, both individually and in groups, be responsible for constructing their own individual robots. Where possible, these robots will be evaluated on students' lab completion and reflection process, and where appropriate through timed and agility robotics competitions. This is considered an introductory level class, and all are encouraged to join—students should welcome, and not fear, our new robot overlords.

Introduction to Web Design (Fall) **NEW**

This course introduces students to the fundamentals of web design using HTML, CSS, and JavaScript. Students will learn to create websites containing tables, lists, images, hyperlinks, audio, video, and mechanisms for dynamic user interaction through components such as text controls, radio buttons, and checkboxes. In the process, students will learn to deploy their work, create a software portfolio for future accomplishments, and learn important software development skills and concepts that can be applied to other programming settings.

Introduction to Android App Development for Android (Spring) **NEW**

This course introduces students to the fundamentals of app development for Android using App Inventor 2. Students will learn about basic programming concepts and how to deploy their app on an Android device. In addition, students will learn the basics of event-handling, user-interface design, prototyping, the user experience, and other principles involved in the creative process that bring an app to life.

Special Topics in Computer Science (Fall & Spring) **NEW**

This course exposes students to a variety of topics and applications in computer science. Topics studied will vary from year to year and include cryptography, algorithms, artificial intelligence (AI), machine learning, graph theory and combinatorics, and functional programming with Haskell, a language that encourages programmers to reason more mathematically about their code.

Graph theory and combinatorics are two important topics in applied mathematics and STEM. Students will learn about the theory of graphs and how graphs play a larger role in a variety of networks that affect us everyday. Topics include basic properties of graphs, Eulerian and Hamiltonian graphs, coloring theorems, trees, flows, connectivity, searching/sorting/traversal algorithms, basic counting techniques, distributions, linear and inhomogeneous recurrence relations, and generating functions. Both topics are a challenging and fun departure from pure mathematics.

AP Computer Science A with Data Structures

Prerequisites: Well-prepared students should be in honors or extended level math, possess a high degree of motivation, and be comfortable learning at a quick pace.

This course covers the AP curriculum in addition to more advanced topics that would typically be seen in a second course, including data structures and algorithms. Main topics to be covered include variables, data types, selection, iteration, recursion, inheritance, polymorphism, generics, Big-O notation, sorting, searching, sets, maps, linked lists, binary trees, stacks, queues, and hashing. Part I covers object-oriented programming and design in Java. Part II covers data structures.

Accelerated Python (Spring)

Prerequisites: While programming experience is not strictly required, students should be prepared to move at a quick pace. Students should be mathematically mature and feel comfortable programming independently outside of class.

This course moves swiftly and is divided into two parts: The first part of the course will cover all the elements of object-oriented programming. In addition, the course will introduce students to simple graphics and gui programming. The second half of the course will focus on data structures and algorithms. Topics to be covered include linked lists, stacks, queues, hashing, and algorithmic analysis.



Audio Engineering & Music Production **NEW**

This course will explore the process, science and art involved in the production of a contemporary audio recording.

Students will grow their understanding of music production by experiencing the process in three distinct roles: studio musician, audio engineer, and record producer. Students will analyze, consume and perform acoustic and electronic music (yes, we will make many SICK BEATS), learn the basic concepts of working with MIDI, explore the use of microphones, employ classic recording techniques, and learn just what it is a music producer actually does in the music business of today.

Students will glean information from foundational instructional texts that include *Modern Recording Techniques*, *The Mixing Engineer's Handbook*, *Zen and the Art of Producing*, various podcasts, interviews and video sources, as well as the firsthand experiences of their wizened-yet-not-totally-jaded instructor, an active professional musician, engineer, and producer. All students will have the opportunity to sing and play instruments in this course, but proficiency as a vocalist or instrumentalist is in no way required for participation.

INTERDISCIPLINARY

The goal of our interdisciplinary courses is to have students move beyond subject-specific boundaries, while offering opportunities to expand their understanding of a particular topic that no one discipline offers. We seek to develop a more all-inclusive approach to learning with an emphasis on the connections found among disciplines as a unifying thread. Ultimately, the coalescence of knowledge and learning are key in any learning community, and at GDS we view this as part of our larger commitment to a progressive teaching philosophy.

Conflict Analysis and Resolution **NEW**

The course will introduce students to core concepts and processes in conflict resolution. This interdisciplinary field will draw from psychology, political science, public policy, history, anthropology, sociology, economics and other disciplines. It also generates conflict-specific theory and research, as well as procedures and interventions aimed at preventing, diminishing, and resolving conflict. Students will have the opportunity to interact with our Lower and Middle School students in the development of peer mediation initiatives along with other projects.

Neuroscience

In this two-semester elective course, students will be introduced to the biological underpinnings of behavior, particularly when it comes to areas of brain dysfunction. While students will gain a solid grounding in the discipline of neuroscience, it is our deeper hope that through collaborative projects focused on specific topics that are likely to impact their lives (i.e. Anxiety and Depression, Alzheimer's, Autism, Learning and Memory, Schizophrenia, the Adolescent Brain, PTSD, etc.), students will gain a real understanding of how the brain works, how sometimes it doesn't, and what we can do both on an individual and a collective level to help those who need support. In what we think seems like an extraordinary opportunity, we plan to leverage myriad resources here in the DC area to challenge students to be more than consumers of information, but rather active learners and researchers who will, in turn, use their skills to advocate on behalf of others. Throughout the process, students will take the lead in the discovery process, learning not only about a particular body of information, but also developing a skill-set that would enable them to present their learning in a purposeful, sophisticated manner. Ultimately our hope is that students will not only grasp the essential underpinnings of neuroscience but also be able to apply their understanding and to advocate on behalf of those impacted by the various conditions. The neurobiology perspective of the course will complement the



behavioral approach by offering a physiological explanation for normal and pathological behavior. Throughout the year, students will explore the cellular basis of brain function, investigating neural communication, both within a single neuron and between neurons. Our exploration will ground students in a molecular perspective that will foster understanding of neuronal proteins, ion channels, neurotransmitter receptors, and signal transduction. Finally, the brain will be seen as a large organization of neural networks with potential for both extraordinary function and dysfunction. In addition to a number of laboratory investigations, the course will include visits with local experts, and some hands-on collaborative work with area institutions and organizations.

Youth Participatory Action Research (YPAR)

Prerequisite: Permission of instructor

YPAR (Youth-led Participatory Action Research) is an opportunity for students to engage in studying and improving school culture at GDS. This course teaches students how to conduct action research, which includes formulating research questions, conducting focus groups, writing surveys, and making recommendations. The course culminates with a collaborative event with other area schools.

Technology in the Western World ^{NEW}

This course will explore how technology and invention have changed the course of history—beginning with the invention of gunpowder, moving on to the printing press and moveable type, telescopes and microscopes, the caravel and celestial navigation, the development of germ theory.... all the way to the internet and artificial intelligence, and how some of those innovations have had inadvertent consequences. The course will be jointly taught by the history and tech department. Students will make use of the GDS Innovation Lab to enhance their understanding of the mechanics and science of the technology, and the significance of previous technology in helping to make the next “giant leap forward.”

MATHEMATICS

Graduation Requirement: At least three sequential years of math at the high-school level.

The Mathematics Department believes every student can develop a high level of skill and deep understanding of mathematics principles. To facilitate this, we offer a wide range of opportunities for each child. We work carefully to construct numerous course offerings and sequences with wide ranges of challenge, varied teaching approaches, and different assessment strategies in order to help each student find their path to success. When offered a variety of approaches, opportunities to adjust challenge from year to year, and varied opportunities to demonstrate knowledge, students will develop enthusiasm, confidence, skill, and comprehension in our math classes.

To provide maximum opportunity for students to learn at their optimal pace and to offer appropriate challenge and support to develop each student’s potential, the math department divides Geometry into two levels (Core and Extended), and Algebra II and Precalculus into three levels (Core, Extended, and Honors). Extended and Honors sections spend less time introducing or reviewing topics and more time extending ideas and working on more difficult problems. While all of our sections include significant problem-solving, Extended sections often approach new topics through applications and projects, while Honors sections delve more deeply into the theoretical underpinnings of topics and proof. The distinction between levels does not appear on any transcripts or records.

Placement

Placement of students in classes is determined through a cooperative approach toward consensus among the student, the current teacher, the department, the student’s family, and the advisor. The math department engages students in the course selection process in order for students to learn how to make informed and appropriate decisions about their education. Yet it is often challenging for students to decide which course is right for them. It can be particularly challenging for students to know which level of a course is appropriate when they have not had experience in that course. The teachers in the math department have a broader perspective about our curriculum and the level that would be the best fit for the student, but they may not know the larger context of each student’s schedule and interest. This is why we believe it is essential for the registration process to be a conversation among teacher, student, family, and advisor.



Students sometimes want to sign up for an Extended or Honors course to ‘try it out,’ believing that they can drop down at any time if the course does not work out. Our goal is to ensure that students are registered for the appropriate courses initially, because switching courses or levels during the school year is usually not an easy process. While we try to schedule courses so that this process is possible, a change in a course or level may require a substantial change in a student’s schedule, or it may not be possible at all.

Level changes must first be discussed with the teacher of the course. After the initial discussion, the department chair and Dean of Academic Life will be brought into the conversation to determine if such a move is possible and is in the student’s best interest. When a student switches levels, any grades he/ she earned in the initial course will be included in the semester grade in the new course.

Summer Course Work

Because we believe that the mathematical maturation students develop over the course of a school year can rarely be fully attained in an abbreviated, condensed summer course, the only summer math course we recognize for advancement in our course sequence is Geometry. Although summer courses vary widely both in approach and content, we have found that they often focus primarily on skills to the detriment of a deeper understanding of concepts. Our curriculum goes beyond skills to emphasize mathematical inquiry, discovery, critical thinking, problem solving, and making connections among concepts and skills—all of which require a full year of synthesis and development.

Accelerating through the curriculum by taking Geometry over the summer is only encouraged in certain cases, and if a student decides to take a summer Geometry course with the hope of advancing in our sequence, they must:

- Inform their math teacher and High School math department chair by the end of the school year and obtain the GDS course information.
- Keep a portfolio of all summer work (assessments, assignments, syllabus, etc.) to turn in to the department chair in August (if taking the summer course outside of GDS)
- Take and earn a satisfactory grade (B- or above) on the corresponding GDS semester exams.

Important notes about taking Geometry over the summer :

- Summer courses not taken at GDS will appear on GDS transcripts in a special notes section.
- Students are responsible for completing all content and concepts covered in the GDS course, even if it not covered in their summer course.
- Taking a summer course does not guarantee that a student will move on in the GDS course sequence. The department chair will consider the student’s portfolio of work as well as her performance on the GDS semester exams.

Passing Grades

The Mathematics Department seeks to have students understand math sufficiently to ensure success in the next sequential course. Therefore, a student with a low passing grade, between 60 and 70, would be required to take intensive remedial work before advancing to the next course in the sequence. Questions regarding study options may be directed to the Department Chair.

The Math Center

The Math Center offers assistance to students in all math subjects through one-on-one conferences on a request, referral, or drop-in basis. Students seeking help with assignments, concept comprehension, skill refinement, or study techniques are encouraged to visit the center. The Math Center is open during all periods and is staffed by a math teacher or advanced math student.

Use of Calculators

All students need to learn how and when to use calculators. Calculators are used throughout the math curriculum for ease of extended accuracy, for the opportunity to manage complex operations, and for graphing and other visualizations. Although scientific calculators are occasionally sufficient in Algebra I and Geometry, all students are introduced to the graphing calculator as part of their class work and must own a TI-84 or TI-84+ graphing calculator.

Understanding math concepts and expanding on them is a principal goal for students in the mathematics program. To assess students’ achievement, the faculty asks them to demonstrate mastery of the mathematics behind the solutions of problems. Use of the calculator, in some instances, can provide solutions to problems without fostering understanding of underlying concepts. For this reason, calculators are not permitted on some tests or portions of them.



Algebra I

Algebra introduces variables into the operations of mathematics. Topics include linear and quadratic equations, inequalities, polynomials, exponents, formulas, and functions, with a strong emphasis on problem solving and graphing.

Geometry

Prerequisite: Algebra I

The study of geometry concerns the discovery, understanding, and proof of plane and space relationships based on the logical use of definitions and deductive reasoning. Topics include logic and methods of reasoning, angle relationships, parallel and perpendicular lines, polygons, congruence, similarity, circles, right triangle trigonometry, volume, and area. Use of algebra is integral to this course.

Algebra II

Prerequisites: Algebra I and Geometry

This course focuses on functions and operations with functions, including transformations, inverses, composition, and functions as mathematical models. Students study algebraic and graphical representation of equations and inequalities in one and two variables, and perform operations with rational expressions, radicals, rational exponents, and complex numbers. The functions covered include linear, quadratic, exponential, logarithmic, and polynomial.

The extended and honors levels of this course are accelerated and include minimal amounts of review and move steadily through the topics. The honors level includes abstract algebra and focuses on proving the theoretical bases of the material. A demonstrated mastery of previous course material and a greater time commitment for homework and reflection are essential.

Precalculus

Prerequisite: Algebra II

This course continues the study of advanced algebra, trigonometry, and precalculus necessary for the study of calculus and statistics. Topics include exponential, and logarithmic functions and trigonometry, and introductory probability and statistics. Depending on the level, other topics may include parametric equations, polar equations, conic sections and limits, sequences, and series and rational functions.

The extended and honors levels of this course include minimal amounts of review and move steadily through the topics. Demonstrated mastery of previous course material, a greater

time commitment for homework and reflection, and increased independent thinking are all essential.

Statistical Analysis and Applications

Prerequisite: Precalculus

This course covers the core topics and skills of descriptive and inferential statistics. Students engage in discovery of characteristics of data and in open-ended problem-solving through group work and projects. This course emphasizes application rather than proof or theory and is not designed to cover the required topics of the AP College Board curriculum.

AP Statistics **WILL NOT BE OFFERED AFTER 2019-20**

Prerequisite: Precalculus, or co-requisite with permission of the department

This course covers all the topics included in the AP Statistics syllabus. The main topics are data organization, inferential statistics, probability as it relates to distribution of data, and the use of regression in mathematical modeling. Students will complete projects collecting and interpreting data.

Calculus

Prerequisite: Precalculus

A non-AP course, Calculus covers the core topics and skills of differential and integral calculus of one variable. The approach will be concept-driven, with open-ended problem solving playing a major role in the class. Topics include distance, velocity, and acceleration relationships; slope functions and linearizations; area functions; differentiation techniques; and optimization. This course will explore applications from various fields, including economics. By the end of the course, students will be introduced to the idea of integrals. This course is not designed to cover all of the required topics in the AP College Board curriculum.

AP Calculus AB

Prerequisite: Precalculus Extended or Honors

This double-period course is a study of differential and integral calculus of one variable and encompasses all of the topics included in the AP College Board AB Calculus syllabus. Topics include techniques of integration and differentiation; problems of volume, area, and distance; related rates and maxima-minima problems; and simple differential equations. Upon completion of the class, students are expected to take the AP Calculus exam.



AP Calculus BC

Prerequisite: Precalculus Extended or Honors

This double-period course is a study of differential and integral calculus of one variable covering all of the topics included in the AP College Board BC Calculus syllabus. In addition to the topics listed in the AB Calculus syllabus, this course will include parametric equations, polar coordinates, sequences, series, and Maclaurin and Taylor polynomials. Theory will be stressed, as well as problem solving. Upon completion of the course, students are expected to take the AP Calculus exam.

ADVANCED SEMESTER ELECTIVES IN MATH

Linear Algebra (Fall)

Prerequisite: AP Calculus (AB or BC) and permission of the department

This course follows calculus and requires a good deal of rigor and abstract reasoning. It includes the following topics: matrix arithmetic, dot products and cross products, inner product spaces, fundamental spaces of matrices, eigenvalues and eigenvectors, and linear transformations. Students will also independently read on a topic of their choice in advanced mathematics and present a lesson on their reading to the class. In past years, topics have included Fermat's Last Theorem, the Riemann Hypothesis, Godel's Completeness Theorem, and graph theory.

Advanced Linear Algebra (Spring)

Prerequisite: Linear Algebra

Students of introductory linear algebra will continue their study in this advanced course. Topics include QR- and SVD-decomposition; orthogonal diagonalization; Jordan Canonical Form; Unitary, Normal and Hermitian matrices; quadratic forms; linear programming; and various applications such as least squares approximations, Markov matrices, and solving differential equations. Students will also do independent reading on a topic in advanced mathematics and present the results to the class.

Differential Equations (Fall)

Prerequisites: solid foundation in AP calculus and be comfortable working independently. In addition, students should have strong organizational skills and be disciplined problem-solvers.

This course teaches the techniques of how to solve a variety of differential equations from those of the standard first-order and higher to other types requiring a more sophisticated and integrated approach. Students will use computer software to execute calculations, perform simplifications, and generate

visuals that would otherwise be tedious by hand. Necessary topics from calculus and linear algebra not covered in other courses will be taught as needed. Students should be comfortable working independently and be disciplined problem-solvers.

Multivariable Calculus (Spring)

Prerequisite: AP Calculus (AB or BC)

The course continues the study of calculus begun in AP Calculus. Topics include partial derivatives, directional derivatives, vector-valued functions, maxima and minima of functions of several variables, double and triple integrals, and line and surface integrals, and Green's and Stokes Theorems.

Advanced Topics in Mathematics (Spring)

Prerequisite: Calculus or AP Calculus (AB or BC) or permission of the department

This course will introduce students to a variety of topics outside of the typical high school curriculum, including several usually found in college-level mathematics elective courses. Topics might include, but are not limited to, point-set topology, paradoxes, group theory, and formal logic. The course will emphasize the power and beauty of mathematics through the study of these topics and by encouraging exploration and self-discovery of some of the important ideas. Students are expected to complete weekly problem sets as well as complete a presentation on an independent topic outside of the curriculum.

Mathematics for Computer Science and Engineering (Spring)

Prerequisite: Students should be in extended or honors level mathematics. No programming experience is necessary.

This course covers important topics for success in computer science and engineering. Topics to be covered include digital logic circuits, number systems, circuits for addition, algorithmic efficiency, program correctness, divide-and-conquer, recurrence relations, computability, data integrity, graphs, trees, graph algorithms, formal languages, regular expressions, finite-state automata, and Turing machines.

POTENTIAL NEW OFFERING IN 2020-21

Advanced Statistical Analysis and Applications

Prerequisite: Precalculus, or co-requisite with permission of the department

This course covers the concepts and procedures in descriptive and inferential statistics of one and two variable data. The main



topics are data organization, inferential statistics, probability as it relates to distribution of data and the use of regression in mathematical modeling. Students engage in discovery of characteristics of data and in open-ended problem-solving through group work and projects. Students will use software, especially Excel, enabling them to analyze larger sets of data.

While both levels of this course emphasize application, the extended level requires stronger analytical skills as students delve deeper into the mathematical foundations of inferential statistics.

PHYSICAL EDUCATION

Graduation Requirement: Two years of physical education

The goal of the Physical Education Program is to teach students the knowledge and skills necessary to live a healthy life: to embrace physical activity, to think critically, to cooperate across difference, and to solve problems rationally. Health education is integrated into both ninth grade P.E. and P.E. II. The health curriculum content areas include personal health and fitness; family life education; nutrition; disease prevention and control; growth and development; sexuality education; mental, social, and emotional health; safety and injury prevention; prevention of substance abuse; and community health. The themes of responsible decision-making, respect for the worth and integrity of each individual, respect for and understanding of the diverse populations within our community, and consumer awareness run throughout the program.

Physical Education I

All 9th grade students participate in physical education. The main goals of this program are to develop problem-solving skills, increase self-confidence, encourage group cooperation, and teach lifetime health and movement skills and knowledge. These goals are met through the Project Adventure Curriculum, which includes cooperative games, group problem-solving activities, and individual and group trust and initiative activities. Students are introduced to a wide variety of team and individual sports, methods of physical conditioning, CPR, and first aid. Grades are based on effort, improvement, positive attitude, and cooperation. Various health topics are covered as well, including nutrition, sexuality, drugs and alcohol prevention, and social, emotional, and mental health.

Physical Education II

All 10th grade students complete a second year of physical education. The program focuses on the maintenance and improvement of health-related physical fitness; e.g., cardiovascular endurance, muscular strength and endurance, flexibility, and body composition. Students acquire the skills, knowledge, and positive attitude necessary to assess and improve upon one's own level of health and wellness. Stress management and intervention techniques such as biofeedback, yoga, and nutritional education as related to sport performance and body composition are integrated with sport, dance, and exercise as the means to achieve and maintain health and wellness.



SCIENCE

Graduation Requirement: Three years, to include one life science and one physical science.

The goal of courses in the science department is to help students gain a sophisticated understanding of the natural world using the scientific method of hypothesis-driven inquiry and mathematical description. Science literacy requires both an understanding of the fundamental concepts that underpin all of nature and the investigative skills necessary for their discovery. Ideally, the students' selection of science courses should combine the broad scope of scientific disciplines with an in-depth comprehension of at least one field. The introductory biology course for all ninth-grade students provides the foundation of scientific concepts and skills for the other science courses. Courses in the life sciences, physics, and chemistry at the intermediate level offer an investigation of relevant concepts in much greater depth. Finally, Advanced Placement courses in biology, physics, environmental science, and chemistry offer students the opportunity to learn science at the most intense and comprehensive level.

Levels in Courses

To provide maximum opportunity for students to learn at their optimal pace, the science department divides chemistry and physics into two levels: Core and Extended. The Extended sections spend less time introducing and reviewing topics and more time extending ideas and focusing on math-intensive problems. Each level covers the subject matter that is required for students to continue in sequential courses in the curriculum while offering enough challenge and support to develop each student's potential.

Biology 9 (Grade 9)

This introductory course for all ninth grade students emphasizes student-centered, active learning. The course covers many aspects of biological organization, beginning at the molecular level and progressing to interactions at the level of the biosphere. There is a particular emphasis on the levels of organization of populations, communities, and ecosystems. Integrated into the course are basic biological themes including evolution, diversity of living things, homeostasis, complementary structure and function, and genetics. The course exposes students to the basic laboratory techniques required for further study in the sciences, as well as introducing students to the skills involved in writing lab reports.

Physiology (Grades 11, 12)

Prerequisite: Chemistry

This course explores foundational concepts as they apply to specific diseases. Each year a new disease is examined from epidemiology and clinical diagnosis to the most detailed chemical changes in protein and DNA. Diseases studied in previous years include autism, HIV/AIDS, Alzheimer's, diabetes, and sickle cell anemia. Labs are conducted as open-ended investigation, teaching how to conduct hypothesis-driven research. Past labs have included bacterial homeostasis, enzyme activities, and even the characterization of a zombie outbreak.

AP Biology (Grades 11, 12) **WILL NOT BE OFFERED AFTER 2019-20**

Prerequisite: Chemistry

This course follows the curriculum for the AP Biology exam and includes molecular biology, genetics, physiology, evolution, and ecology. The course reflects 2012 adjustments to the AP curriculum designed to enable students to spend more time understanding biological concepts while developing reasoning skills essential to the scientific practices used throughout their study of biology. A more student-directed, inquiry-based lab experience provides students opportunities to design experiments, collect data, apply mathematical routines, and refine testable explanations and predictions.

Chemistry (Extended or Core)

In chemistry, we seek to understand what matter does by understanding how electrons, atoms, and molecules interact. This is accomplished through a study of atomic theory, stoichiometry, gas laws, thermodynamics, and equilibrium. In addition, students will apply these concepts through experimentations in the laboratory. The learning in both the classroom and the laboratory includes an environment of self-discovery and discussion.

Extended versus Core Chemistry

To provide the maximum opportunity for students to learn at their optimal pace and to offer enough challenge and support to develop each student's potential, Chemistry is divided into two levels: Core and Extended. The level designations do not appear on any transcripts or records.

Each level builds a solid foundation of chemistry and covers the subject matter that is required for students to continue in the science curriculum. However, the Extended Chemistry sections spend more time understanding concepts and models in a more in-depth manner in addition to focusing on math-



intensive problems. Students in the extended course should feel comfortable spending less time practicing problems in order to move through the material at a more accelerated pace. The Extended Chemistry class is strongly recommended for students interested in pursuing an AP science or who are considering taking AP Chemistry. Students select levels themselves with the advice from their current teacher and the science department.

Advanced Chemistry

Prerequisite: Core or Extended Chemistry

In this single period course, students will continue their studies in chemistry by focusing on topics that include molecular bonding theory, thermodynamics, kinetics, equilibrium, electrochemistry, and an introduction to organic chemistry. They will hone their analytical and logical problem-solving skills while developing a clear, comprehensive understanding of atomic structure and reactivity. Independent learning, higher-level error analysis, and experimental designs are emphasized in both the classroom and laboratory.

AP Chemistry (Grades 11, 12) **WILL NOT BE OFFERED AFTER 2019-20**

Prerequisite: Chemistry Extended and/or permission of the department

Corequisite: Precalculus

In this course, students hone their analytical and logical problem-solving skills. Through the fast-paced study of topics such as bonding, kinetics, equilibrium, and electrochemistry, and with an emphasis on models and their uses and limitations, students develop a clear, comprehensive understanding of atomic structure and reactivity. Independent learning, higher-level error analysis, and experimental designs are key components of the course. The course encourages the interrogation of existing scientific models and methods.

Physics (Extended or Core)

Physics Core: Corequisite: Algebra II

Physics Extended: Prerequisite: Algebra II

These courses use observation and inquiry to develop physical concepts. Students observe phenomena, model it mathematically, and use models to predict outcomes. The courses emphasize a conceptual understanding of the laws of physics with a moderate amount of mathematical problem solving, relying on skills developed in Algebra II. Topics include selections from kinematics, force, energy, momentum electricity and magnetism, optics, light, heat, waves, and circuits.

Extended versus Core Physics

To provide maximum opportunity for students to learn at their optimal pace and offer enough challenge and support to develop each student's potential, Physics is divided into two levels, Core and Extended. The level designations do not appear on any transcripts or records. Extended Physics spends less time introducing and reviewing topics and more time extending ideas and focusing on math-intensive problems. Students select levels themselves, with advice from their current teacher and the science department.

AP Physics, Level C (Grades 11, 12) **WILL NOT BE OFFERED AFTER 2019-20**

Prerequisites: Permission of the department

Corequisite: AP Calculus

This course follows the curriculum for the AP Physics (level C) test and is comparable to first-year college physics for science and engineering majors. The first semester covers mechanics and the second semester covers electricity and magnetism. Calculus is used throughout the course, and the primary focus is on improving the student's problem-solving skills.

AP Environmental Science (Grades 11, 12) **WILL NOT BE OFFERED AFTER 2019-20**

Prerequisites: Chemistry and permission of the department

This course follows the curriculum for the AP Environmental Science Exam and is taught at an introductory college level. Major topics include a review of ecological principles, geology and earth systems, biodiversity, biogeochemical cycles, human population growth, energy, pollution and environmental health, natural resource management, and global climate change. This course will have laboratory and fieldwork.

Hot, Crowded, and Hungry: Research in Environmental Science

This course is designed for students who wish to engage in the scientific study of ecology and environmental science through extensive field investigations and experiments in the laboratory. We will explore topics such as climate change, biodiversity, wildlife biology, and water quality within the context of our need to feed, house, and provide energy for a growing global population. While there will be a significant amount of fieldwork and hands-on investigations over the course of the year, we will also spend a considerable amount of time discussing current events relating to these topics. Students will have the opportunity not only to build skills in the use of the scientific method, critical analysis, and the interrogation of



data, but also to design and carry out their own experiments in the laboratory and in the field. One overnight trip is likely to be included as part of the course depending on student availability and scheduling.

Neuroscience

See listing under Interdisciplinary Department.

Quantum Mechanics and Special Relativity

Prerequisite: AP Calculus and AP Physics, or permission of the department

This course focuses on two primary topics in modern physics: special relativity and quantum mechanics. Special relativity involves time and spatial descriptions of physical phenomena when speeds approach the speed of light. The quantum mechanics section will focus on models in wave mechanics that form the basis for much of modern physics and physical chemistry. The course will also review experiments conducted in the early 20th century that led to the development of quantum mechanics as a field of research.

Research Methods in Biology (Grade 12)

Prerequisites: Physiology or AP Biology, Extended Chemistry, prior experience in a research laboratory, or approval of the department

The Research Methods course teaches students how to think like a scientist through hypothesis-driven inquiry by involving the student in authentic research investigations. Specific skills taught include understanding scientific literature, designing experiments, conducting contemporary biotechnological methods, using statistical and graphical analysis of data, and writing professional scientific reports. The first semester consists of conducting two or three long-term, open-ended investigations in which these skills are learned and applied. The second semester is dedicated to group research investigations of the students' choice after the teacher's approval of a formal research proposal.

SEMESTER ELECTIVES IN SCIENCE

Astronomy (Fall)

This course is a scientific exploration of the human place in the universe. We study the origin and history of the universe in addition to the formation of the Earth and the solar system. We compare the Earth's properties with those of the other planets and explore how the heavens have influenced human thought and action. Students will study the properties of light

and matter as well as the tools astronomers use to measure radiation from celestial sources. The course also covers exciting contemporary topics such as black holes, the expansion of the universe, and the search for extraterrestrial life. Note: This course does NOT fulfill the physical science requirement and it is NOT a prerequisite for Astrophysics.

Astrophysics (Spring)

Prerequisite: Algebra II

This course focuses on how the physical laws determine the structure and evolution of stars, galaxies, and the universe as a whole. Emphasis is placed on understanding how observational evidence allows us to understand the universe. Topics will include the evolution of stars, galaxies and the universe as a whole. We will dig deep into the topics of gravity and spectroscopy to understand these cosmic processes. Students will analyze real data taken from astronomical objects. This is a fast-paced course that often uses algebra and trigonometry to model our universe and its laws. Facility and comfort with these mathematical topics is a must. Note: This course does NOT fulfill the physical science requirement.

Investigations in Botany (Fall)

Prerequisite: Biology 9

This is a Botany course designed for students who have an interest in a greater understanding of vascular plants and how they function. Course content will include plant taxonomy, plant histology, plant metabolism, and plant evolution. Discovery learning will include a herbarium collection, mineral nutrient deficiencies in plant growth, pollinating mechanisms in plants, and a look into the ecological and economic importance of the plants to humankind.

Evolutionary Biology (Spring)

Prerequisite: Biology 9

This course is designed for students with a keen interest in exploring Biology from an evolutionary viewpoint. The content of the course will be based on fundamental insights of Darwin's Theory of Natural Selection. This course, unlike traditional biology courses, will be divided into the following themes: variation and mutation, genetic drift, modes of selection, reproductive isolating mechanisms, natural selection and speciation. The course will culminate with patterns and processes in macroevolution, punctuated equilibrium, origin of life, phylogeny, and human origins.



Forensic Science (Fall, Spring, or both Semesters)

This course explores the science behind crime scene evidence. Students learn how to secure and record evidence at a crime scene. Additional topics include exploration of DNA collection and its replication through PCR, the movement and patterns of fire in arson investigations, and the use of chromatography as a confirmatory test for many different types of trace evidence. Application of knowledge will be completed through numerous crime scene scenarios and labs. The content for each semester will be independent of the other; one semester is not required in order to take the other, and students may take both semesters without having material repeat. Please note: Forensic Science does NOT fulfill the physical science requirement.

Game Theory (Fall & Spring)

Prerequisite: Algebra II

This semester-long course is designed for students to develop their ability to make and analyze strategic decisions during interactions (or as we call them: games). Students will learn to solve classic games, such as “chicken,” while refining their strategies for more complex games, such as the repeated prisoner’s dilemma. As we progress through the semester, we will study more advanced ideas such as strategic moves, ultimatums, Nash equilibriums, and strategic irrationality. The semester will conclude with a discussion of how to relate our understanding of game theory to real-life situations, ranging from navigating the internet to decision making during the Cuban Missile Crisis.

POTENTIAL NEW OFFERINGS IN 2020-21

Molecular and Cellular Biology

Prerequisite: Chemistry

This course will give students a comprehensive and rigorous overview of foundational topics in the discipline of cellular and molecular biology. Students will conduct an in-depth exploration of the cell as a dynamic center of complex processes such as cell proliferation, cell differentiation, cell signaling and communication, and bioenergetics. The various course concepts will be connected through a central theme, such as cancer biology or molecular genetics. This course will also include a significant lab component, where students will have opportunities to design experiments, collect data, apply mathematical routines, and refine testable explanations and predictions. Engaging in open-ended investigations will emphasize and develop critical thinking skills. A strong background in chemistry is necessary.

Genetics and Evolutionary Biology

Prerequisite: Biology 9

This course is designed for students with a keen interest in biology from an evolutionary viewpoint. The content of the course will begin with an exploration of Darwin’s Theory of the Origin of Species, the basis for an understanding of the complexity and richness of life on earth. This course will be divided into the following themes: the historical framework of evolutionary biology and, more substantially, the organic framework of evolution, which includes cell division, genes and chromosomes, Mendelian genetics, molecular genetics, origins of variation, genetic basis of microevolution, patterns and processes in macroevolution, and the origins and diversity of life. In the first semester, molecular genetics will be the underlying principle. In the second semester, controversies surrounding the origins of life on Earth will be discussed and students will examine the phylogeny of six Kingdoms in depth. The capstone of the course will focus on human evolution.

Advanced Topics in Chemistry

Prerequisite: Chemistry Extended

In this course, students will continue their studies in chemistry by focusing on topics that include thermodynamics, kinetics, equilibrium, acid-base chemistry, electrochemistry, valence bond theory, molecular orbital theory, experimental design, and data analysis. They will hone their analytical and logical problem-solving skills while developing a clear, comprehensive understanding of atomic structure and reactivity. Independent learning, higher-level error analysis, and experimental designs are emphasized in both the classroom and laboratory.

Mechanics

Corequisite: Calculus

This course provides a systematic development of the main principles of physics, emphasizing problem-solving and helping students develop a deep understanding of physics concepts. Specifically, the class will cover kinematics, Newton’s laws, work, energy, power, linear momentum, circular motion and rotation, oscillations, and gravitation. Strong emphasis is placed on solving a variety of challenging problems, some requiring calculus, and will include a laboratory component.



Electricity and Magnetism

Prerequisite: Calculus

Electricity and Magnetism covers electrostatics, conductors, capacitors, dielectrics, electric circuits, magnetic fields, and electromagnetism. Calculus is used throughout the course to formulate physical principles and apply them to physical problems. The primary focus is on improving the student's analytic problem-solving skills.

Advanced Global Scientific Issues in the Environment

Prerequisite: Chemistry

This laboratory course allows students to delve into the study of select major environmental issues. Topics may include global warming, recycling of materials, air pollution, drinking water, and various environmental toxins. Supplementing classwork are field studies and trips that emphasize a hands-on, interdisciplinary approach to environmental assessment. Experiencing and understanding the plant and animal life common to the mid-Atlantic region fields and forests, students will spend much of the spring also studying the re-emergence of life in the green spaces in the greater DC region.

WORLD LANGUAGES

Graduation Requirement: At least two successive years of the same language completed in high school.

The World Languages Department offers a wide range of courses across four language programs: Chinese, French, Spanish, and Latin. All programs include a course at the introductory level and progress through intermediate- and advanced-level courses up to the college-level courses of Advanced Placement and advanced literature and culture seminars. As they progress in their language study, students gain competency in auditory and oral skills, in reading and writing, and in cultural awareness.

The World Languages Department seeks to have students sufficiently proficient to ensure successful passage to the next sequential course. While a student with a low passing grade may advance to the next level, under such a circumstance the department strongly recommends that such students pursue significant remedial study prior to beginning a new course. Questions regarding study options may be directed to the department chair.

Placement

Initial placement of students in language classes is determined through a brief language placement test given by the department. The placement test includes a written and an oral component. The goal is to determine the course that best develops each student's potential and continued growth.

Foundations I in Chinese

This course is designed to help students develop basic communication skills by building a strong foundation of grammar and vocabulary. While instructional emphasis is placed on oral communication, reading and writing Chinese characters is introduced at this time. Study is complemented by other resources, such as Chinese music, film, and children's stories and varied classroom projects, including videos and in-class skits. Chinese culture is one of the core elements in this first year of study.

Foundations II in Chinese

While continuing to focus on the development of oral/aural skills in communicative contexts, students undertake a comprehensive study of grammar and build a large practical vocabulary. Students expand their foundation in reading and writing characters. Reading selections, music, art, videos, and films further familiarize students with the culture of China.



Chinese Language & Culture

In this intermediate course, students continue to develop proficiency in speaking/listening and reading/writing on a wide variety of current themes and issues by learning advanced vocabulary and grammatical structures. The course's audio/visual material introduces students to everyday situations and to cultural traditions in the Chinese-speaking world. Great emphasis is placed on developing the students' skills in writing and presenting in Chinese.

Advanced Chinese Language & Culture

Prerequisite: Chinese Language & Culture

This advanced-level class is designed for students who have completed Chinese Language & Conversation. Students continue to work with the Far East Chinese for Youth series and to hone their ability to discuss cultural topics with greater proficiency in the target language. Technology plays a key role in teaching, learning, practicing, and developing outreach project, including a pen pal program, video conferences, multimedia resources for the use of learning, and computer-based assessments.

Advanced Topics in Chinese Studies

This is a college level course, as an alternative for AP course. This course will focus on the Chinese studies on history, philosophy, literature, and culture. Students will take an exploration of Chinese history, culture, philosophy, and society as it has been presented in the 20th and 21st century through the medium of film and literature. By engaging the contemporary uses of the Chinese language, students will work to improve their skills in the language and to broaden their awareness of its roots in a very rich and ancient past as well as the current issues of our day.

Advanced Topics in Chinese Studies II

This course aims to help students continue building a solid foundation for four basic skills—listening, speaking, reading, and writing—in an interactive and communicative learning environment. With a focus on current events and contemporary Chinese culture, the course deepens students' grounding in linguistic competences and cultural competency and prepares them for advanced college level study of Chinese.

This course will provide students with extensive language skills and broad cultural exposure. The course is organized in eight units by cultural themes for two semesters. This course will follow the guidelines from the American Council on the Teaching of Foreign Languages (ACTFL). Students will be able to demonstrate their Chinese proficiency across

the three communicative modes (interpersonal, interpretive, and presentational) and the five goal areas (communication, cultures, connections, comparisons, and communities).

Students will have ongoing and varied opportunities to further develop their proficiencies across the full range of language skills within a cultural frame of reference reflective of the richness of Chinese language and culture.

By the end of the academic year, students are expected to attain the Advanced Low level of proficiency (ACTFL Oral Proficiency Guidelines), meaning that students should have acquired the ability to handle successfully most uncomplicated communicative tasks and social situations. Students will be able to initiate, sustain, and close a general conversation with a number of strategies appropriate to a range of circumstances and topics.

Foundations I in French

This course is designed both for students who have had no previous work in French and those who need to perfect their elementary skills before going on to Foundations II. Primary emphasis is on acquisition of vocabulary and mastery of basic verb forms. All four skills—understanding, speaking, reading, and writing—are emphasized. Reading selections and videos introduce students to the geography and culture of France and of other French-speaking areas of the world.

Foundations II in French

While continuing the development of oral-aural skills, students undertake a comprehensive study of grammar and build a large practical vocabulary. Students are also introduced to writing. Reading selections and watching videos introduce students to the geography and culture of France and of other French-speaking areas of the world.

French Language & Culture

Students continue to develop proficiency in speaking and writing on a wide variety of current themes and issues by learning to use advanced vocabulary, verb forms, and grammatical structures. Oral skills are enhanced through viewing and discussing selected videos. Reading skills and cultural awareness are developed through the study and discussion of articles from French periodicals and excerpts from French and Francophone literature.

Introduction to French Literature

This course introduces students to the study of major French works such as *Le petit prince* by Saint-Exupéry and *Huis Clos* by Sartre. Students will also watch a movie, *Au revoir les enfants*, by



Louis Malle, and short authentic videos to develop their listening comprehension skills. Through the discussion of literary texts, videos, and cultural themes, students will review and expand grammatical concepts and acquire an extensive vocabulary. Emphasis is put on oral and written proficiency and students are encouraged to speak and write more critically and analytically.

Advanced French Language and Culture

This course is designed for those students who have completed Introduction to French Literature, but who are looking for a course less demanding than AP French Language and Culture. The course, through units of cross-cultural study, allows students to explore various themes such as family, education, and immigration. It uses films, readings, and related art forms as a springboard for discussion, presentation, and improvisation as well as creative and analytical writing. Comprehensive grammar review and vocabulary building exercises are included. *Not offered as a Pass/Fail Option.*

AP French Language & Culture

Prerequisite: Permission of the department

The AP French Language and Culture course is a rigorous course taught exclusively in French that requires students to improve their proficiency across the three modes of communication: Interpretive, Interpersonal, and Presentational. These three modes of communication, defined by the Standards for Foreign Language Learning in the 21st century, are fundamental to the AP French Language & Culture course. At the heart of real-world communication lie six overarching themes, which students meet and master through authentic texts and multimedia materials gathered from throughout the French-speaking world that provide a diverse learning experience. Students are required to engage in real-life activities outside the classroom to enrich their French language and culture experience. *Not offered as a Pass/Fail Option.*

Francophone Literature & Culture

Prerequisite: AP French Language & Culture

This college-level course focuses on the Francophone world while further developing language skills and imparting a greater facility in speaking, reading, and writing in French. Emphasis is also placed on vocabulary acquisition. Following a historical introduction and a study of French authors, the diversity of Francophone cultures and voices is explored through the works of writers from Canada, the French Antilles, and Western and Northern Africa. This course explores various themes such as loss, exile, identity, and women's voices. *Not offered as a Pass/Fail Option.*

Foundations I in Latin

This course is designed for students with no experience in Latin or for those who need to strengthen their knowledge of the basics. Students learn Latin through a natural language approach by reading, writing, listening, and speaking. The material introduces students to an understanding of the ancient Mediterranean world and the daily life of its various inhabitants. During this first year, great emphasis is placed upon building a strong vocabulary and the fundamentals of the Latin noun system.

Foundations II in Latin

This course continues the work of Foundations I, introducing students to the more complex constructions of Latin, especially to its very flexible verb system. Building a strong vocabulary and being able to comprehend spoken as well as written Latin remain primary goals. The students continue learning the foundations of the culture—especially the mythology, heroes, and heroines—of the ancient Mediterranean world to prepare them to read Classical Latin literature.

Latin Language & Culture

This course completes the student's introduction to the Latin language. Students work on mastering the classical idiom, especially its love of subordinate clauses. As they study ancient Mediterranean history to understand the ethical and political systems that gave birth to the modern world, great emphasis is placed on building the students' confidence in writing and speaking Latin. To achieve this end, students read the works of ancient authors such as Catullus, Martial, Cicero, Plautus, and Petronius as they learn to discuss and write about these texts in the language itself.

Introduction to Latin Literature: From Myth to Sci-Fi

This course focuses on imaginary worlds created over the millennia from ancient Greece and Rome to early-modern Europe. Students will read and discuss a range of texts about imaginary worlds to improve their abilities in Latin to speak and to write more critically and analytically. The texts of this course will appeal to the lovers of myth, of fantasy, of science, and of philosophy as each of the potential authors (Ovid, Apuleius, Thomas More, and Baron Holberg) will open for us conversations into how we think, talk, and live in our imaginations. Students will continue to speak, read, write, and converse using these texts, which will allow them to write and act in their own creative projects.



Urbs Aeterna: The History, Literature, and Topography of Rome

Prerequisite: Introduction to Latin Literature or department approval.

This advanced level course is a 3,000-year survey of Rome as a window into the human condition. Through the study of archaeological remains, Latin literature, inscriptions, and urban design, with authors ranging from Plautus in the 3rd century B.C. up to the current Pope of Rome, students will explore some of the great themes of civilization that continue to confront us such as inequality, the place of religion, freedom of conscience, human dignity, and how these ideas manifest themselves not only in language but also in art and architecture.

Speculum Vitae: Latin Comedy

Prerequisite: Advanced Latin Literature: Myth to Sci-Fi or Departmental Approval

In this advanced course, students read from and perform parts of comedies from the playwrights Plautus (ca. 250-184 BCE) and Terence (ca. 195-159 BCE). Students gain an understanding of how dramatic comedy grew out of religious festivals and Rome's emergence as an empire into the world of Hellenism. Students also write their own comic skits according to the types inherited or invented by the Romans.

Foundations in Spanish

Designed for students who have had no previous experience in the language and for those who need to reinforce basic skills, this course simultaneously builds all four language competencies (speaking, listening, reading, and writing). Students learn how to communicate on very familiar topics using a variety of words, phrases, and simple sentences. Through various media, students encounter aspects of Spanish culture. This course is taught primarily in Spanish.

Integrations in Spanish

Designed for students who have completed Foundations or have demonstrated the equivalent level of proficiency, this course continues building all four competencies (speaking, listening, reading, and writing.) Students will use a series of simple sentences in given contexts to navigate everyday situations and create with the language. Emphasis is placed on students' further engagement with materials from Spanish cultures. This course is taught primarily in Spanish.

Applications in Spanish

Designed for students who have completed Integrations or have demonstrated the equivalent level of proficiency, this course reviews and reinforces the four language skills (speaking, listening, reading, and writing) thereby strengthening all modes of communicating: interpreting, conversing, and presenting. Students practice maintaining conversations with one another, as well as understanding and organizing information across multiple time frames on a variety of topics related to everyday life and personal interests. This course is taught entirely in Spanish.

Spanish Language & Culture

This course is designed for students who have completed Applications or have demonstrated the equivalent level of proficiency. Emphasis is placed on developing more advanced structures in various timeframes and expanding vocabulary, applied in more extensive oral and written presentations. Furthermore, students explore in greater depth socio-cultural, historical, and literary topics through resources such as short stories, art, films, and readings. These themes provide context for further developing the skills required for interpretive, communicative, and presentational modes. This course is taught entirely in Spanish.

Introduction to Spanish Literature

Prerequisite: Spanish Language & Culture course or a placement exam

This course introduces students to the study of Spanish and Latin American writers such as Jorge Luis Borges, Pablo Neruda, Gabriel García Márquez, Ana María Matute, Isabel Allende, among others. Focus is placed on readings and discussions of literary texts and diverse cultural themes. Students expand their vocabulary and refine their oral and written expression through informative class presentations, creative compositions, and persuasive and analytical essays. Resources such as films, documentaries, interviews, and videos enhance students' interpretive skills. This course is taught entirely in Spanish.

Advanced Topics of the Spanish-Speaking World

Prerequisite: Introduction to Spanish Literature

This course is designed for students who have completed Introduction to Spanish Literature or wish to continue their studies beyond AP Spanish Language and Culture or Advanced Spanish Literature. Works from Spanish, Latin American, and Caribbean authors provide a base for cross-cultural exploration and discussion of cultural, historical, literary, and sociopolitical



issues. Course work includes analysis of African and indigenous cultural concepts as well as creative writing. In addition, students will examine issues related to cultural identity, immigration, feminist cultural expression, contemporary political trends, and the environment. The course stresses proficiency in reading, writing, listening, and speaking at an advanced level through various cultural expressions, including music, film, literature, and journalism. Emphasis is placed on vocabulary acquisition.

AP Spanish Language & Culture

Prerequisite: Introduction to Spanish Literature and permission of the department

The AP Spanish Language & Culture course is a rigorous course taught exclusively in Spanish that requires students to improve their proficiency across the three modes of communication: Interpretive, Interpersonal, and Presentational. These three modes of communication, defined by the Standards for Foreign Language Learning in the 21st Century, are fundamental to the AP Spanish Language & Culture course. At the heart of real-world communication lie six overarching themes, which students meet and master through authentic texts and multimedia materials both gathered from throughout the Spanish-speaking world and providing a diverse learning experience. Students are required to engage in real-life activities outside the classroom to enrich their Spanish language and culture experience.

Advanced Spanish Literature

Prerequisite: Permission of the department

This course offers advanced Spanish students an opportunity to read literature on a college level from a variety of Hispanophone cultures. The year is devoted to Latin American literature and literature from Spain. Readings are selected from contemporary works and will include poetry and short stories from the likes of José Martí, Rubén Darío, Juana de Ibarborou, Luis Palés Matos, Gabriel García Márquez, Juan Rulfo, and Federico García Lorca. Movies and songs are included as integral parts of the literature's culture and are intended to enhance oral, writing and analytical skills through essays, presentations, and the exchange of ideas on politics, history and literature. Feminism, black literature, avant-garde, magical realism are topics that demand from the student consistent oral input, which will require the integration of other academic fields. All together, we will continue to sharpen all the student's skills in the study of the language and the culture.



