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Graduation Requirements

Graduates must have completed 24 full credits to earn their Purnell School diploma. One credit is equivalent to two semesters of study. Each semester elective counts for 0.5 credits. Additionally, each student must successfully participate annually in a Project Exploration offering, participate in a Summer Internship before Senior Year, and successfully pass all athletic requirements, while she attends Purnell. At all grade levels, the Assistant Head of School for Academic Affairs works with each students to create a balanced schedule. Transfer credits are assigned at the discretion of the Assistant Head of School for Academic Affairs. Departmental requirements are as follows:

Departments:

- **English**: 4 full credits, one credit at each grade level
- **History**: 3 full credits, must include World History, Government/Economics, and US History
- **Language**: 2 full credits
- **Math**: 3 full credits, must include Algebra I and Geometry. Algebra II is strongly recommended
- **Performing Arts**: 1 full credit, including Survey of Performing Arts for entering 9th graders.
- **Science**: 3 full credits, must include Biology and Chemistry
- **Studio Arts**: 1 full credit plus one Art History course, including Survey of Studio Arts for entering 9th graders.
Specialized Diploma Program
Students who want to focus on exploring their strengths can apply to participate in a specialized diploma program. These programs ask students to complete additional requirements for graduation, including internships, weekend activities, projects, and additional coursework. Students will receive more information about available programs and application procedures each spring. Courses that fulfill the specialized diploma requirements are designated by SD-CA (Specialized Diploma for the Creative Arts), SD-STEM (Specialized Diploma for STEM), or SD-GC (Specialized Diploma for Global Citizenship) in each course description.

Independent Study
Students will at times have particular drive in a specific subject and complete all of the coursework offered in our general curriculum in this department. If they have successfully completed the courses that we offer, the student would be a candidate for applying for an independent study course. The course is considered a distinct course and will be assessed and noted on the transcript accordingly.

In order to apply for an independent study, the student must complete a course proposal two weeks prior to the end of the previous term. This proposal will be the result of a collaborative process with a teacher who will become the faculty sponsor. The proposal must include a course outline which indicates the general course of study, a week by week schedule of topics covered and assessment tools for the course. The student is expected to meet with her faculty sponsor twice a week during the independent study. The proposal must be submitted to the Assistant Head of School for Academic Affairs, the Department Chair for the discipline studying, and the faculty sponsor. Approval will come from this team.

Additional information regarding Independent Studies is listed in our Student and Parent Guide.

Online Classes
We encourage students to be independent learners and thinkers. One way to expand a student's independence and further their understanding of advanced concepts is to take an online class. Students may choose to take courses independently while at Purnell which are not reflected on their Purnell transcript. However, in order for students to earn credit for taking an online course toward a Purnell diploma, the student must first obtain the approval of the Assistant Head of School for Academic Affairs. In order to do this, students must complete Purnell’s application for online coursework. After the student receives approval from the Assistant Head of School for Academic Affairs, they may register for the class. If the coursework is included as one of the student’s core classes and reflected on the Purnell transcript, the student will have the course fees refunded to the student’s incidental account upon submission of their receipt of payment from the organization to Purnell’s business office and successful completion of the course. If a student does not pass an online course, they will not be reimbursed for the tuition. In addition, Purnell is a member of the Online School for Girls (OSG). Purnell students are eligible to take OSG online courses at a discounted rate.

In order for students to be eligible for an online course, she must have successfully completed Purnell’s curriculum. She must have demonstrated a high level of independence within Purnell’s curriculum and demonstrated responsibility for her learning at Purnell.
ENGLISH DEPARTMENT

About English at Purnell
The Purnell English Department offers courses designed to help students develop their reading, writing, speaking, listening and critical thinking abilities. Each student completes four years of English, and she may also select to complete one or more electives after her first year (new students may take electives with the approval of the Humanities Division Chair and the Assistant Head of School for Academic Affairs). We define the word “text” in a broad manner; our courses include all genres of literature in terms of written text, but also incorporate reading of text from other media such as film, spoken word, and visual media. To prepare students for work and college experiences, our classes feature many opportunities for informal and formal writing, frequent seminar-style discussions, and opportunities to demonstrate growth and mastery. Though studying literature, students cultivate literacy and effective communication skills. In the Fall term, students focus on developing expository, narrative, comparative writing. In the Spring term, the focus shifts to developing persuasive and creative writing. It is a Department standard to complete two major and two minor assessments per term. Every year, students learn to be progressively more independent and sophisticated in acquiring new vocabulary, comprehending texts, and communicating their ideas.

English A
English A lays the essential foundations of clear, competent communication through reading, writing, speaking, and listening. Students will improve reading comprehension and literary analysis while evaluating plot, narrative, and character. Students will be able to enrich their understanding of literature through historical and cultural context. Possible texts include: Kidd’s The Secret Lives of Bees, and various short stories such as Stockton’s “The Lady and Tiger,” Jackson’s “The Lottery,” Saki’s “The Open Window,” and Connell’s “The Most Dangerous Game.”

English B
English B lays the departmental foundations of effective communication through reading, writing, speaking, listening, and interpreting and producing digital media while looking at the overall theme of “Coming of Age.” Foundations of storytelling provide the thematic focus for the course. Students will be able to enrich their understanding of history through narrative and deepen their engagement with the literature through historical and cultural context. Possible texts include: Coming of Age Around the World, Purple Hibiscus, 19 Varieties of Gazelle, Climbing the Stairs, The Tragedy of Romeo and Juliet

English C
The thematic focus for this course is “Metamorphosis” and students focus on the power of one’s ability to make a change in one’s self and in one’s society. The texts will illuminate the ways in which individuals or groups while recognizing the changes happening within themselves have used their voices to change the world around them. Building on their reading, writing, speaking, listening, and interpretive skills, students will produce a variety of written works and digital media that demonstrate understanding of theme, narrative and author intent. Students will study the tools used by authors to communicate with audiences, and will learn to wield these literary tools in their own nonfiction and fiction work trying to capture their own idea about how they are changing and growing closer to adulthood. Possible texts include: Satrapi’s Persepolis: The Story of a Childhood, Strayed’s “Wild”, Ibsen’s “A Doll’s House,” Stevenson’s Just Mercy: A Story of Justice and Redemption, and Shakespeare’s Macbeth

English D
This course focuses on discovering one’s self and the relationship of the self with which one is surrounded. Students will examine the socio-historical background of each writer and explore the direct or indirect connections to each text. The goal of this course is to prepare the student for further academic or professional society by improving critical reading, literary analysis, and clarity in written and oral expression. Possible texts include: Yousafzai’s I am Malala , Adichie’s Half a Yellow Sun, Mingmei Yip’s Peach Blossom Pavillion, and Huxley’s Brave New World
English E
The ultimate goal of English E is for students to become adept, original, confident communicators. The thematic focus of this course is “Perspectives;” students will explore the ways authors communicate in various genres including fiction, creative nonfiction and nonfiction. Students will analyze, in particular, key rhetorical moments in American writing and will learn to independently analyze the techniques that make a text enduring. Students will use logic, research and appropriate evidence to synthesize a skillful argument not only in traditional exposition, but through creative and multi­media means, as well. As writers, students will develop an awareness of their strengths and understand how best to employ the writing process and sophisticated vocabulary to create effective prose and poetry.

Possible texts include: The Norton Sampler, 8th Edition, Miller’s The Crucible, Shakespeare’s Othello, Palahniuk’s Fight Club, Hurston’s Their Eyes Were Watching God

English F
This course is focuses on exploring Intertextuality (the shaping of texts through other texts) and examining the ways in which authors communicate across the ages through the texts they create. Through various texts, students continue to develop sophisticated, and original arguments about literature and art. They will examine themes, motivations, audience and style to discover universal patterns in literature. In the second semester, students may have the opportunity for independent selection of material and long-term research/analysis of a classic piece of literature, looking carefully at allusion, adaptation, originality, symbolism and other devices prevalent in literature.

Possible texts include: Foster’s How to Read Literature like a Professor, Shakespeare’s Hamlet, Stoppard’s Rosencrantz and Guildenstern are Dead, Shakespeare’s The Taming of the Shrew, and Oyeyemi’s Boy, Snow, Bird

ENGLISH ELECTIVES:

English Foundations A
This course is taken in conjunction with English A. This course provides additional support for the literature and writing in English A. This course reinforces the essential concepts of clear, competent communication by improving comprehension through active reading and clear writing for academic success. Foundational workshops may include writing effective paragraphs of various types, grammar and mechanics of basic sentences and paragraphs.

Possible text include: Foundations First with Readings (Units 1-4)

English Foundations B
This course is taken in conjunction with English B and provides additional support for the literature and writing in English B. This course reinforces the foundational concepts of effective communication through reading, writing, speaking, listening, and interpreting of various texts. Foundational workshops may include: active reading, clear writing for academic success, essential mechanics within written expression.

Possible text include: Foundations First with Readings (Units 5-7)

English Foundations C
This course is taken in conjunction with English C and provides additional support for the literature and writing in English C. This course reinforces the foundational principles of continued growth in reading, writing, speaking, listening, and interpretive skills. Foundational workshops may include strategies for academic writing and reading, time management, note-taking, and research.

Possible text include: Writing First with Readings Units 1-4

English Foundations D
This course is taken in conjunction with English D and provides additional support for the Literature and writing in English D. The course reinforces the essential skills of critical reading, analytical thinking, and clarity of expression. Foundational workshops may include strategies for academic writing and reading, time management, and note-taking.

Possible text include: Writing First with Readings Units 5-8

Orton­Gillingham Language Training Tutorial (Yearlong or Semester based on teacher recommendation)
The Orton-Gillingham Language Training Tutorial will focus on language remediation for a student with a diagnosed reading disorder. Tutorial will focus on reading, writing, and spelling through the Orton-Gillingham approach. Tutorial is a diagnostic-prescriptive setting where each student’s individual strengths and needs are regularly assessed and the tutorial is adjusted to match that student’s academic profile. The goal of tutorial is to build a foundation of language skills to facilitate a student’s independence as they enter the Literacy Skills class and eventually to Advocacy-Based Support.

**Fall 2016**

**Argument & Debate**

This course will focus on synthesizing language art skills of reading, writing, speaking, listening, and research with logic, and problem solving. Students will explore individualized and current issues to apply their developing skills of extemporaneous public speaking and debate. Through the study and practice of debate, students will develop effective research skills to develop arguments as well as effective refutations and rebuttals.

**Spring 2017**

**Shakespeare: Written for the Stage** (English or Performing Arts credit)

Have you ever read Shakespeare and thought it was boring, confusing, or outdated? Since Shakespeare wrote directly for the stage, students will read aloud to help understand and analyze the material. One comedy and one tragedy will be read throughout the course. Through acting exercises, scene-work and historical readings, students will begin to understand Shakespearean language so that the actor can easily perform the exciting characters. There will be a final presentation created for performance at New Jersey’s Shakesperience at Drew University in the spring and for the End of Term Showcase.
HISTORY DEPARTMENT

**Modern World History**
History for grade 9 students will begin with an exploration of colonialism, looking at examples from different continents and how they affected the country and its people. In the second semester the focus will be more global; students will explore how WWII, Communism, and the Cold War changed the ways countries and people interacted. The course will end with a look the world today and how nations from around the world have overcome their time as colonies and relate to each other in the post cold war environment. Students will examine history through multiple lenses such as religion, geography, international politics, history, and art. Discussion in class will be a crucial element of this course. Additionally, there will be nightly homework assignments, quizzes, a research paper and a final exam.

**Comparative Government, Civics, & Economics**
This course is the requirement for grade 10. Political and economic events of the 21st century require students to become informed citizens with a basic understanding of government and economics as it relates to both the United States and the world. This course provides a survey of the organization of American government, which includes an overview of the historical significance and provisions of the Constitution; the Bill of Rights; Congress; the Supreme Court; the Presidency; political parties and interest groups. Other governmental systems and theories are also examined to compare and contrast the benefits and drawbacks of our system. Students then apply that knowledge to examine different types of governments and duties of citizens from around the world. The second half of the year is dedicated to the study of basic economics. Students go through the basic components of what makes up an economy and how it works. They then move into the four types of economic systems that exist today in the world; traditional, command, market, and mixed. The idea of supply and demand is an important aspect of economics, and they will focus heavily on what these terms mean and why they are important in economics. Finally, students will develop and understanding of the three types of economies that exist in parts of the world today; Capitalist, Communist, and Socialist. Discussion in class will be a crucial element of this course. Additionally, there will be nightly homework assignments, quizzes, essays, and a cumulative final exam.

**United States History: Sharing Ideals with the World**
This is a required course for grade 11. Whether you realize it or not, the history of America and the United States has shaped our lives today through founding ideals, values, assumptions, and economic and governmental structures. Historical events have played a large role in defining the experience of different groups of people, such as women, African Americans, Native Americans and others in the United States. In this course, you will look at historical and current events to discover the effects history has had on different groups of people and different regions within our country, as well as the effect American ideals have had on the world. The course will begin with the arrival of Europeans to North America and end with an examination of recent US foreign policy to decide what the role of the US should be in the world. Much of the learning is project based. Discussion and participation in class will be an important element of this course. In addition to projects, there will be daily assignments, quizzes, writing assignments, activities, and a final research paper.

**HISTORY ELECTIVES:** (Actual courses offered from list below will vary depending on student interest. Prerequisites for Electives: Successful completion of World History, Comparative Government, Civics, and, Economics, and/or recommendation by History faculty.)
Fall 2016

**How did we get here? Profiles of Female Athletes (SD GC)**
Who broke the gender barrier in sports? Who defied the law of their land and said, "I can play that sport so watch me, learn from me, and join me." What leadership skills does it take to be an outlier? Who just wanted to be able to exercise the same way men were allowed? All those questions and more will be explored as this hands on class takes an in depth look at women who blazed the trail and the modern female athlete who carries the torch today. Field trips include a day on the Appalachian Trail and a visit to the United States Golf Association Museum. Guests include a local basketball coach who finally got her chance to coach and has won two straight conference championships (2015 and 2016)! To insure the legacy is passed on, this course will include the opportunity to share your knowledge with local elementary and middle school students.

**Race to the White House: Election 2016**
Every four years, America goes under an election year. The importance of the National Election in America not only affects who will be our next President, but it also shows we as citizens have the right to vote. Students will begin the course with evaluating the political party system within America and getting a basic understanding of all sides of the political system lie. Students will then move on to evaluating the candidates that are running for office and what each candidate stands for. As a class, students will evaluate debates, as well as articles that come out about the candidates, and also different political channels and how they portray the opposition. After the election, students will move on to examining other countries that are going through an election and compare and contrast how each country handles their election year.

Spring 2017

**Make Her Mark: The Journey of “Herstory” (SD GC)**
Throughout world history women have been a major influence on the world politically, socially, and culturally. The PBS *Makers* series will serve as the catalyst for this elective. Students will examine the varied ways in which women have contributed to the world politically, socially, and culturally; which is Her story often untold by history (his story). Students will examine the varied ways in which women have had an impact on not only the global scale, but also locally within the surrounding Purnell community.

**Global Issues/Global Citizenship (SD GC)**
Technology and communication innovations have increased the interconnectedness of the people and countries of the world so much that almost every political or social action in one country has an effect on other countries and people of the world. This semester course will focus on the concept of global responsibility that stem from issues that transcend borders like global warming, pollution, poverty, nuclear proliferation, and issues of scarce resources like water. Students will develop multiple perspectives by engaging with local and international efforts to address these issues and to help find solutions. Throughout this course, the concept of global citizenship that accompanies global responsibility will be introduced and considered.
(required for Global Citizenship Specialized Diploma)
Purnell School: Curriculum Guide 2016-2017

LANGUAGE DEPARTMENT

Spanish 1
First-year language learners will learn basic grammatical rules that will allow them to write simple sentences, ask and answer simple questions, and understand spoken Spanish. The goal of the first year is to develop understanding of the basic parts of speech such as nouns, verbs, and adjectives, and how those parts of speech fit into simple present tense sentences. A heavy emphasis is placed on acquiring new vocabulary, and learning the phonetics of the language. Students are taught to recognize common letter combinations and structures for ease of spelling and pronunciation. First year students are also introduced to the culture of applicable nations through the celebration of holidays and festivals, tasting foods, and viewing films, among other things.

Spanish 2
Second-year language learners will build on the skills they developed during their first year of study. They learn more complex grammatical structures and put these skills to use writing longer and more complex dialogues and compositions. Students are expected to express themselves more readily in the target language in class. Emphasis is still placed on acquiring vocabulary and asking and answering questions. Films viewed in class become more reflective of the history and culture of target nations/communities. As in the first year of study, students are asked to reflect on their role in the world as Americans, though on a higher level. Holidays and festivals continue to be celebrated, though students may be asked to do research into the beliefs and customs of a target-language nation. 
Prerequisite: Successful completion of level one of language or teacher recommendation.

Spanish 3
In the third year of language study, students are beginning to prepare themselves for further study at the college level. A heavy emphasis is placed on the mastery of complex grammatical structures, teaching students not only “how” to use a verb tense, but “why” it is used. Pronunciation skills are fine-tuned and spoken speech becomes more varied and creative. Films are chosen for third-year classes based on their historical and cultural lessons. Students are asked to write topical dialogues and short compositions throughout the year. Students read and discuss a novel in class as well as use the target language to speak about it. Current events in target-language nations are shared and discussed. A large portion of the class is conducted in Spanish with the expectation that students begin to increasingly interact in the target language. 
Prerequisite: Successful completion of level two of language or teacher recommendation.

Spanish 4/5
In the fourth/fifth year of language study, students further prepare themselves for college-level study. Students read and discuss a novel in class which focuses on more advanced grammar. Students focus on gaining more access to the language by studying and mastering complex grammar topics such as the preterit, imperfect, future, conditional and subjunctive tenses as well as affirmative commands. Students apply these skills in both written and oral expressive activities. They study the art, history, architecture and music of Spanish-speaking cultures. Grammar topics are integrated into students’ daily exercises. Emphasis is placed on reading, writing and speaking the language. The course is conducted primarily in Spanish. 
Prerequisite: Successful completion of level three of language or teacher recommendation.
English as a Second Language (ESL)
The goal of Purnell’s English as a Second Language (ESL) program is to help our international students achieve a balance of language skills that would allow them to perform competently and confidently—and on a par with their native peers—the academic writing tasks and presentation skills relevant to their content classes. This ESL course sequence is designed to enhance the ability to read critically, discuss effectively, and present ideas in a correct, coherent, and effective manner. Clarity and precision of pronunciation and intonation are developed and assessed during oral presentations. Students will develop writing skills with individualized support for each student.

Along with a group understanding and agreement from the student’s ESL teacher, English teacher, advisor, and academic dean, a student must have a score of 85 or higher on the TOEFL with no subcategory lower than 20 to option out of this course. Students who wish to attend a more competitive university will be encouraged to take the second level of this course until they have reached a score of over 100.

ESL I:
ESL I is a course in basic integrated skills focusing on the development of beginning grammar and vocabulary through reading, writing, listening, and speaking. This course is designed to facilitate English language development and mastery, for our school’s ESL learners, through direct instruction and collaboration with content teachers.

ESL II:
ESL II focuses on a student’s fluency and accuracy of writing in a variety of narrative and expository forms. Direct instruction will focus on using clear and concise expression, sentence variation, and the process of editing and rewriting. Students will build on their research skills, college application essays, and speech writing for seniors. Students will also complete various projects that will require them to share information using oral and written communication and technology. ESL II is a uniquely designed course intended to provide students with advanced skill practice in preparation for standardized tests such as the SAT, ACT, and TOEFL, which assesses an English Language Learner’s English proficiency to qualify for college admission.
MATH DEPARTMENT

Algebra I
This course will develop an understanding of basic algebra and analysis while focusing on logic, reasoning, and problem solving skills. Topics covered include: use of variables, evaluating expressions, solving a variety of equations, creating graphs, solving and graphing linear functions, and an introduction to statistics.

Geometry
This course will develop deeper reasoning skills as well as spatial intelligence. It will cover many ideas with respect to geometry in everyday life, as well as skills in geometric constructions and analysis. Topics covered include: area and perimeter of polygons, circles, solving for missing angle measures (supplementary, complementary, etc.), perpendicular lines, parallel lines and transversals, proving similarity and congruence, classifying quadrilaterals, and the Pythagorean Theorem.

Prerequisite: Successful completion of Algebra I.

Algebra II
This course is designed to be a comprehensive study of advanced algebra concepts including linear and quadratic equations, inequalities, functions, radicals, imaginary and complex numbers. Emphasis is placed on practical applications and modeling.

Prerequisites: Successful completion of Algebra I and Geometry.

Trigonometry
This yearlong math course is designed to be a comprehensive study of Trigonometry. Major topic areas include the six trigonometric functions, right-triangle trigonometry, trigonometric function graphs, radian angle measure, analysis of periodic data, oblique triangles, and vector algebra.

Prerequisites: Successful completion of Algebra I through Algebra II.

Pre-Calculus
Pre-Calculus is an advanced extension of Algebra and Trigonometry. Prior knowledge from both is built upon here with additional applications. The Pre-Calculus course is designed to encompass all those topics necessary to begin successfully in a college calculus course. Critical components of the course include: problem solving, polynomial, rational, exponential, logarithmic, polar, and parametric functions, trigonometric graphs and equations, the complex number system, and probability and statistics.

Prerequisites: Successful completion of Algebra I through Trigonometry.

Calculus
This yearlong math course is designed to be a review of some advanced algebra and trigonometry topics and an overview of the principle concepts of both differential and integral calculus and their application. Topics to be studied include but are not limited to: limits & continuity, the derivative, methods of differentiation (explicit and implicit), related rates, graphical analysis of functions (extrema, asymptotes & points of concavity), optimization, velocity & acceleration, definite and indefinite integrals, methods of integration, the fundamental theorem of calculus, area, volume, arc length, and work. Prerequisites: Successful completion of Algebra through Pre-Calculus.

Applied Mathematics
This course will cover a survey of topics in applied mathematics, stressing the connections between contemporary mathematics and modern society. The underlying goal is to increase your ability to interpret and reason with quantitative information, as it applies to your future courses, your career and your daily life. Topics may include: numbers in the real world, interpretation of statistics, financial management and probability in games. This course is open to students who have successfully completed Geometry and Algebra II and wish to study an elective in mathematics. [Student Incidentals will be charged for field trips, not to exceed $50.]
Math Foundations (Algebra I/II & Geometry): (Yearlong or Semester based on teacher recommendation)
This course is taken in conjunction with Algebra I, Geometry, and Algebra II. This course reinforces the essential concepts from Pre-Algebra to Algebra II and skills necessary to function in authentic problem-solving situations. Students will focus on skills and applications related to success in their current math placement.

Math Tutorial: (Yearlong or Semester based on teacher recommendation)
One-on-one support for both general math knowledge and content specific support. This course will directly support the material covered in a student’s math class in addition to building a foundation of mathematical skills through an individualized curriculum designed specifically for that student’s needs and strengths.
PERFORMING ARTS DEPARTMENT

All classes may be used for the Specialized Diploma in the Creative Arts.

GENERAL PERFORMING ARTS:

Survey of Performing Arts (Fall) (SD- CA)
This course is required for all Ninth graders. Students first explore the disciplines of Dance, Music, and Drama in small workshop settings. Journals are required and small vocabulary quizzes are also given in each workshop. Goals for the class include: learning the universal language of the theater, developing skills for group work, and gaining confidence onstage. Eventually the full class comes together to create an ensemble show highlighting students in all three disciplines. All students will perform at the End of Term Performing Arts Showcase.

Behind the Scenes (Spring) (SD- CA)
Lights, Costumes, Sets, ACTION! Do you ever wonder what it takes to light a show or create a set? Students involved in this class will get the opportunity to focus on the behind the scenes aspects of the theatre. Students will discuss the various roles including stage manager, set designer, lighting technician, makeup designer, among many others and gain an appreciation for the men and women behind the curtain. Hands on projects will give each student a chance to work in a variety of roles throughout the semester and students will work as the crew for the finals week performances.

DANCE:

Beginner Dance Sampler (Fall) (SD- CA)
Dance Sampler is a dance technique class designed to allow the beginner student the experience of many different forms of dance in a semester. Dancers will begin by learning the fundamental movement principles of Ballet at the barre and center. Then will do units in Modern Dance, Jazz Dance, World Dance, and Hip Hop. This class will culminate in the performance of a complete choreographic ensemble work and small group pieces. We will focus on building strength and flexibility, versatility in movement style, and an appreciation of many different dance forms. No experience necessary.

Intermediate Tap (Fall) (SD- CA)
Have you ever wanted to develop your dance skills in the intricate style of tap dance? Whether rhythm tap or Broadway tap, both showcase the musicality and percussive use of your feet as an instrument. Students in this class will not only get the chance to learn the techniques of both styles but also see how they have evolved over time. As students gain an understanding of rhythm they will begin focus on intricate footwork creating a percussion instrument with their feet. Choreography will be created for the class to perform in the End of Term Showcase. Tap shoes MUST be purchased. Previous experience necessary and teacher approval.

World Dance (Spring) (SD- GS/CA)
Dance is a universal language. All around the world people dance for many reasons: social, entertainment, art, cultural, religious, and more. Students in this class will take a trip around the world looking at how and why other countries dance. Through movement lessons, research, videos, and readings the class will get a chance to experience dance outside of the traditional genres studied. No experience necessary. All levels.

MUSIC

Music PLUS (Positive Learning and Leading Using Song, Sound, and Service) (Fall and Spring) (SD- CA)
Music PLUS introduces students to a diverse offering of musical activities using educational principles such as team building and leadership. We focus on music as a whole, introducing a variety of genres such as jazz, blues, rock, swing, etc., as well as instrumentation, vocalization, performance, songwriting, recording, and media.
**Beginner/ Advanced Beginner Guitar** (Fall) (SD- CA)
Guitar group is designed for the students to start learning basic chords, easy songs, and a little bit of music theory, all in a fun, relaxed group environment. Students will be introduced to the basics of guitar: understanding the guitar as an instrument – how it works and how to care for it, key concepts such as developing a vocabulary of basic guitar chords and the ability to change between those chords effectively, strumming technique, melody, harmony and rhythm. Students will learn pop, rock, blues, indie, and traditional tunes to build up an accessible repertoire of songs and skills.

**Intermediate Guitar** (Spring) (SD- CA)
Intermediate guitar group takes the knowledge from the beginner/advanced beginner guitar class and pushes forward to the next level of music theory and performance. Using the key concepts of developing a vocabulary of guitar chords, scale patterns, strumming and picking techniques, melody, harmony, and rhythm, the class begins to focus more on performance and how all of those concepts and skills work together.

**THEATRE:**

**Diversity in Contemporary Theater** (Fall) (SD- GC/CA)
This course will take a look at the human experience in theatre as it pertains to issues surrounding cultural identities. Students will explore contemporary plays and musicals that focus on issues surrounding race, ethnicity, gender identity, sexual orientation, religion and more. Through readings, discussions, theatrical exercises including scene work, and viewing professional works students will gain knowledge and understanding of various portrayals on the stage. Possible works to study include August Wilson’s *Fences*, Moises Kaufman’s *The Laramie Project*, Chiori Miyagawa’s one act play *Antigone’s Red*, Ayad Akhtar’s *Disgraced*, Jonathan Larson’s *Rent*, and many more. (Upper Level Course, 10’s with Parent Permission)

**Children’s Theatre** (Spring) (SD- CA)
Children’s Theatre is designed for the student interested in theatre and/or education. Students in this class will get the chance to work first hand as a teacher and a performer. Students will first learn strategies and techniques for introducing children to theatre from the perspective of a teacher. Students will gain knowledge on ensemble building, positive reinforcement, and the ability to engage a classroom through improvisation, puppetry, mask making, and other creative drama techniques through "Viola Spolin's Theatre for the Classroom". Students will then get the opportunity to create a stage presentation for children and work directly on the production process from all angles in the final showcase piece which will be performed for an audience of children with an included workshop taught by the students.

**Shakespeare: Written for the Stage** (Spring) (SD- CA)
Have you ever read Shakespeare and thought it was boring, confusing, or outdated? Since Shakespeare wrote directly for the stage, students will read aloud to help understand and analyze the material. One comedy and one tragedy will be read throughout the course. Through acting exercises, scene-work and historical readings, students will begin to understand Shakespearean language so that the actor can easily perform the exciting characters. There will be a final presentation created for performance at New Jersey’s Shakesperience at Drew University in the spring and for the End of Term Showcase.
SCIENCE DEPARTMENT

**Biology**
This yearlong course is an introduction to life sciences. Through the year, students will be provided an understanding and appreciation of the diversity and interconnectedness of life on our planet. The students will build a solid base of knowledge from which to draw on in future science classes, as well as in life. Because biology is literally the study of living things, this course will be divided into the following major topics: criteria for living things, cellular biology, characteristics of living things such as reproduction, growth and development, structure and function, energy used, obtained and transferred, and ecology. The students will be asked to consider the following questions: What determines if a substance is considered living? How do the processes that occur in living organisms help them create their niche? How do living organisms exist together? In addition, throughout the course students will put their science knowledge to practice by conducting scientific experiments on various topics.

**Prerequisites:** Requirement for ninth graders. [Incidental fees up to $50 may incur for field trips.]

**Chemistry**
What are we made of? Why do things explode? If these questions intrigue you, then this course is for you. This is a yearlong course that will explore the wonders of chemistry and help students bring chemistry into their everyday lives. They will discover that chemistry is not just limited to their textbooks, but is also constantly surrounding them. Students will unfold the basic structure of all matter by studying the atom. With this new knowledge, the students will go on to investigate molecules, compounds, chemical reactions, and bonding. Throughout the course, the students will continually be relating what they are learning to their everyday lives. We will be investigating the scientific method, scientific measurement, atomic structure, chemical names and formulas, chemical quantities and reactions, electrons in atoms, chemical periodicity, ionic and covalent bonding, acids and bases, specific properties of various elements, and various chemists and their contributions to society.

**Prerequisites:** Successful completion of Biology and Algebra I [Incidental fees up to $50 may incur for field trips.]

**Conceptual Physics**
If a heavy person and a lightweight person open their identical parachutes at the same time, who will reach the ground first? If a potted plant were to fall on your head, would it hurt more if the pot were to break or to bounce? Why does the earth orbit the sun? What causes the water level to rise and to fall at the beach? Why do you get that funny feeling inside when the elevator starts moving? This yearlong science elective is designed to be a study in the basic concepts of physical science and their application to our everyday lives, answering the questions above and many more. The class will focus primarily on the study of mechanics: linear and projectile motion, inertia, forces, impulse and momentum, work and energy, circular motion, center of gravity, rotational mechanics, universal gravitation, and gravitational interactions. If time allows during the year, concepts involving electricity, magnetism, sound and light will also be examined. Although successful mathematical application of the concepts covered is a must, emphasis is placed on each student’s conceptual understanding of these concepts and on her opportunity to learn them through first-hand experience, experimentation and analysis. Student grades will be based on participation, homework, tests and quizzes, projects and presentations, and lab activities.

**Prerequisites:** Successful completion of both Geometry and Algebra I. [Incidental fees up to $50 may incur for field trips.]
ELECTIVES: (Actual courses offered from list below will vary depending on student interest.)

Anatomy and Physiology (SD: STEM)
Do you ever watch Grey’s Anatomy or House and wonder about the medical terms? Have you ever had a headache and taken an aspirin, but are not sure why? Do you ever wonder what the numbers in your blood pressure mean? Have you ever had more questions when you left the doctor’s office, then when you arrived? This course will look at practical applications for anatomy and physiology. Students learn the gross and microscopic anatomy of the following systems: integumentary, skeletal, muscular, circulatory, respiratory, digestive, urinary, nervous, and reproductive. Some systems will be covered in depth, while others will be discussed at an introductory level. The course will investigate the body through lectures, hands-on activities, dissection, and field trips.
Prerequisites: Successful completion of Biology.

Engineering, Design & Robotics (SD: STEM)
Engineering, Design & Robotics is a two-semester course with the option for a student to opt in at the start of the second semester if she has already taken the elective PLTW Introduction to Engineering course previously offered as part of the Purnell School science curriculum. The first semester of this course will answer questions such as: Who is an engineer? What do engineers do? What fields do engineers work in? What skills do engineers need? and What is the engineering design process all about? Students will investigate engineering and the design process through regular exposure to current events in STEM, team instant design challenges, design case studies, and a look at current global design initiatives and relevant engineering research and development. Additionally, students enrolled in the course will gain skills in computer aided design through the use of Autodesk Inventor, a state-of-the-art, 3-dimensional CAD interface. The second semester of the course will focus primarily on logical flow and basic robotics programming using the Lego Mindstorms NXT platform and will involve an introductory unit on electricity and magnetism wherein students will learn about and create simple electric motors and generators. Students will work to model, to build, and to program Lego robots to perform a variety of tasks and to solve simple design problems. Related topics introduced throughout will include torque, power, rotational and translational motion and simple gearing systems. If you are curious about science and technology, and you like to tinker, to create, and to solve problems, then this course is for you!
Prerequisites: Successful completion of Algebra I and Geometry.

Fall 2015

Psychology (SD: STEM)
This course will introduce the systematic and scientific study of the behavior and mental processes of human beings and other animals. Included is a consideration of the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. Students also learn about the ethics and methods psychologists use in their science and practice.

Spring 2016

Environmental Science (SD: STEM)
Environmental science is an elective course that brings together many academic fields that integrates physical, biological and information sciences to the study of the environment, and the solution of environmental problems. Environmental science emerged from the fields of natural history and medicine, but today it provides an integrated, quantitative, and interdisciplinary approach to the study of environmental systems. You will also be studying the new face of sustainability with regenerative design.
STUDIO ARTS DEPARTMENT

Fall 2016

Digital Photo I (SD- CA)
This is a semester-long course for the beginning/intermediate photographer. This is a class less about snapshots and more about student-built objects or environments which may or may not include posing models. Students will construct elaborate, creative sets to photograph, and they’ll cast dramatic lighting. They will use Photoshop or GIMP to further perfect their colors and values. The class will explore fashion photography and marketing theory.

Fashion, Beauty and Food Packaging (2D Design) (SD- CA)
This is a semester-long course that introduces students to package design. Students will explore traditional and modern patterns, colors, and designs. They will make their own fonts, design shopping bags, store interiors, and album covers. They’ll investigate creative storefront design, branding and marketing theory.

Sculptures and Buildings (3D Design) (SD- CA)
This is a semester-long course that introduces students to traditional and modern sculpture. Students will learn about Zaha Hadid and Peter Marino. They will design sculptural objects like fragrance bottles or surfboards. They will design a stylish bridge with an apartment complex atop it. The course also covers interior design and marketing theory.

Asian African and Oceanic Art - ART HISTORY (SD- CA)
This is a semester-long course that introduces students to world cultures. Students will focus on customs, religion, and daily life of non-Western cultures. They will apply what they have learned to a series of creative projects, like costume design, set design, and screenwriting.

Ceramics I/II (SD- CA)
This course is an introduction to the medium of earthenware clay and various fired techniques for decoration. We will explore the processes of hand-building, using methods of pinch, slab, and coil. Projects will focus on making figures, vessels and a self-directed conceptual project. Artwork will include the creation of both functional and nonfunctional pieces, always with an emphasis on craftsmanship and overall design. Art history will be introduced in a project appropriate, non-linear fashion. Advanced students will be introduced to the use of the potter’s wheel. Students will learn the basics steps necessary to integrate form and function. The first project will focus on creating the most basic form, the cylinder. Making sets of items such as cups, plates, and bowls, assist students in gaining strong craftsmanship. The final project will be a self-directed non-functional project, which stresses concept and its connection to form.

Mixed Media (SD- CA)
This course explores the use of various combined media to produce two-dimensional and relief mixed-media works of art. Students learn how to layer ink, pastel, watercolor, collage, and acrylic paint in projects that range from observational to imaginative invention. Picasso, Schwitters, Rauschenberg and other master artists are examined and discussed. Artwork varies in size from small-scale artworks to a large complex final project. Students are encouraged to express themselves in artworks that are rich in surfaces and unique imagery.

Drawing (SD- CA)
Drawing is a semester long course designed to build a strong foundation in the visual arts. Proficiency in drawing expedites learning in all other studio classes. Projects begin with observational drawing. These ‘learning to see’ exercises teach the artist how to create two-dimensional interpretations of form, space and light. The elements of art and principles of design are part of the art-specific vocabulary that is learned and used in class critiques. The second half of the course progresses to abstract and non-objective drawing. Instruction is through demonstration, example, practice and suggestion. Research and analysis of various artists comprises the writing component of this course.

Jewelry Design (SD- CA)
In this semester long course students create designs for unique forms of wearable art. Nature, architecture, art and history are the concept resources for inventive jewelry design. Students will develop the jewelry from concept
through working drawings, final designs and then manufacture the artwork themselves. Jewelry is created from wire, string, and authentic silver clay. These materials can be used with semi-precious stones, beads and found objects to create inventive expressions of jewelry design.

**Spring 2017**

**Illustration (SD- CA)**
The art of creating a graphic representation that conveys an idea clearly, immediately and broadly has been part of the lexicon of human communication since the dawn of civilization. Learn how to utilize different methods, techniques and media to produce images that support, direct, describe and enrich our perception of the world around us. Study the history of illustration while creating unique works of art of your own. Basic skills will be developed through a series of projects that increase in complexity and content and real world applications will be emphasized through projects that include the Purnell community and beyond.

**Painting (SD- CA)**
This semester long course will begin establish fundamental painting skills and techniques. Projects begin with monochromatic exercises in watercolor to build the students experience, confidence and understanding of composition and value. Still-lifes are used for this introductory project and also in beginning color exercises in acrylic paint. Portraits and layered abstractions are some of the other projects that are created as students acquire experience and proficiency with paint. Demonstrations, and individual instruction are used to give the students direct feedback and feedback. Project critiques are used to increase the student’s proficiency in critical discussions.

**Fashion Design (SD- CA)**
This semester long course begins with learning to draw the croquis figure in fashion proportion. Students learn how render fabrics, textures and accessories using various art media. The students then create unique fashionable designs by using nature, architecture, art and other cultures as inspiration. Fashion is explored as ‘wearable art’ rather than utilitarian garments. The second half of the semester is filled with the construction of two garments that will be modeled on stage during Spring Showcase. The themes are: a deconstructed and reinvented garment and a garment fashioned from non-traditional material. Emphasis is placed on creativity and unique forms of expression.

**Sculptures and Buildings (3D Design) (SD- CA)**
This is a semester-long course that introduces students to traditional and modern sculpture. Students will learn about Zaha Hadid and Peter Marino. They will design sculptural objects like fragrance bottles or surfboards. They will design a stylish bridge with an apartment complex atop it. The course also covers interior design and marketing theory.

**Art History: Women Artists (SD- CA)**
Where were all the women artists? This question perplexed art historians and enthusiasts alike for centuries. This course explores the art and crafts of women artist throughout history. Students will learn how the expectations for behavior, and educational opportunities affected women as they tried to find outlets for personal expression. Painters like 17th century artist Artemisia Gentileschi will be discussed because of the barriers they broke in the face of overwhelming obstacles. Quilting, pottery and fibers will also be studied to learn how female craft artists challenged the notion of purely utilitarian art to create unique art forms. Students will enjoy the hands-on projects.

**Fractals, Mandalas and the Golden Rectangle (SD- CA)**
This semester long course explores the many connections between mathematics and art through projects that also develop the student’s ability to use tools and various mediums in the discipline of art making. The students will create geometric patterns based on the Greek principle of the Golden Rectangle, fractal designs as seen in nature and work in both 2D and 3D design. This course has little reference to observational drawing and is better described within the realm of design.

**Survey of Studio Art (SD- CA)**
Survey of Studio Art is a required introduction to the Johnson Art Center for ninth grade students. This semester-long course develops creative problem solving and fundamentals design skills through structured projects
that range from 2-D to 3-D. Students learn the basic etiquette of working in an art community and the associated responsibility for giving and receiving critical feedback through critiques and collaboration.

**Anatomy for Artists (SD-CA)**
How are we put together? How can my drawings of people or animals become more informed and expressive? This semester long course explores the skeletal and muscular systems of the human body. Students will work with a model occasionally and draw and paint the figure with an emphasis on careful observation. They will also construct a Classical inspired torso in clay. Leonardo Da Vinci, Michelangelo and other artists who use expressive anatomically will be studied. This course is an integrates science and art through the use of hands-on projects.