STRATFORD ACADEMY

CURRICULUM

DRAFT

Revised August 2017

At Stratford Academy, we uphold these core values to guide us in all we do.

Excellence: We demand the highest level of effort.

Integrity: We foster an atmosphere of trust.

Freedom: We value academic, religious, and personal freedom.

Responsibility: We demand individual, communal, and fiscal responsibility.

Community: We foster a sense of belonging, comfort, and care at Stratford and beyond.

The curriculum at Stratford is framed with high standards and based in research, and is designed to foster intellectual independence — teaching young people how to think instead of what to think, and where to look instead of what to see.

This guide was written by the faculty at Stratford Academy in an effort to share with you a glimpse of what happens in each division and each classroom throughout the year. It is by no means an exhaustive description of every single thing that is taught.

THE PRESCHOOL

The Preschool is comprised of the Beginners (3 year olds), Prekindergarten (4 year olds), and Kindergarten classes. Each class has a teacher and a full-time assistant, with an average teacher to student ratio of 1:8. There are several special annual events in the Preschool! The Thanksgiving Pow Wow involves all of the preschoolers; they work with our Preschool & Lower School music teacher to perform a Thanksgiving Concert. Preschoolers also perform during Grandparents' and Special Friends' Day in the Spring. Each Preschool class hosts a Mother's Day Tea in May, and participates in Preschool Field Day. The Preschool at Stratford is a special, joyful place where play and learning combine on a daily basis.

BEGINNERS

The youngest members of the Stratford Family are our 3-year-olds—the Beginners. These "Littlest Eagles" focus on the work of young children, which is play! Their school days incorporate numerous opportunities for socializing, decision-making, and working with others as they are exposed to the letters, numbers, shapes, and colors that make up the building blocks of Preschool. Classroom experiences as well as enrichment classes in art, music, Spanish, science, physical education serve to help our youngest students become familiar with the world of school, build confidence and independence, expand vocabulary, and gain essential social skills. Students learn about their campus and school community through their weekly visits to the Olson Library for story time and book check out, sharing their work with office staff and middle and upper school students, and visits from school and community helpers throughout the year. They enjoy thematic activities each week based around holidays, seasons, and the letter of the week. A highlight during the Beginners' year is the Royal Tea Party, when Beginners dress up as kings and queens, read lots of nursery rhymes, and have a lesson from Miss Manners.

In Language Arts, Beginners will…

- Experiment and play with language through song, chant, rhyme, finger plays, and story
- Begin to express needs, ideas, and feelings using appropriate and expanding vocabulary
- Begin writing with shapes and strokes of the "Mat Man" (*Handwriting Without Tears*) with exposure and practice with all capital letters
- Build phonemic awareness through a variety of listening and speaking activities

In Mathematics, Beginners will…

- Count to 10, recognize numerals 0-5, and match quantity to numerals
- Begin to develop and practice one-to-one correspondence
- Be introduced to and participate in basic graphing, calendar, measurement, time, and predicting activities

In Social Studies, Beginners will…

- Begin to understand and use the language of time (yesterday, today, tomorrow, before, after, etc.)
- Understand and use the language of space (up, down, under, over, below, behind, etc.)
- Begin to use simple maps of familiar environments
- Begin to demonstrate an understanding of basic geographic concepts

In Science, our Beginners will…

- Be introduced to the habits of mind, vocabulary, and language of a science thinker
- Begin using the actual tools of science (balance, test tubes, beakers, measuring tools, etc.) to complete weekly hands-on experiments

PREKINDERGARTEN

Our PreKindergarten students pick up where our Beginners leave off, and continue to work through opportunities for socializing, decision-making, and working with others. PreKindergarteners learn with *The Letter People*, and work on their writing using the *Handwriting Without Tears* program. PreKindergarten is also designed around weekly themes, with fine-motor, gross-motor, writing, reading, and mathematics activities incorporated each week. PreK students love their art, music, Spanish, science, library, technology, and physical education enrichments. Miss Manners also visits the PreKindergarteners several times each year.

In Language Arts, PreKindergarteners will…

- Communicate using complete sentences with age appropriate descriptive language, words, and articulation
- Use correct letter formation as well as spacial awareness, with the support of the *Handwriting Without Tears* program
- Strengthen listening, phonemic awareness, comprehension skills with use of story books, nursery rhymes, songs, fairy tales, and the *Letter People* curriculum

In Mathematics, PreKindergarteners will…

- Count by ones to 25 and beyind
- Count by tens to 100
- Count backwards 10 to 0
- Recognize numerals to 20
- Develop one-to-one correspondence to 10
- Order numbers to 10
- Identify basic shapes
- Be introduced to basic three-dimensional shapes
- Sort objects and describe attributes
- Recognize, extend, and create simple patterns
- Participate in graphing activities
- Compare sets using *more, less, or equal*
- Be introduced to subitizing

In Social Studies, PreKindergarteners will…

- Understand and use the language of time
- Establish reference points in time
- Demonstrate an awareness of the passage of time and of period of time as “the past,” the present,” and “the future”
- Understand and use the language of space
- Establish reference points in actual and represented space
- Use simple maps of familiar environments
- Demonstrate an understanding of basic geographic concepts

In Science, PreKindergarteners will…

- Continue focusing on the habits of mind and language of a science thinker
- Start learning that all things are made of atoms and molecules
- Experience hands-on experiences in every science lesson
- Learn about the scientific method

KINDERGARTEN

The Kindergarteners at Stratford learn about their world and their community through our own Stratford Grows curriculum. Our teachers take the typical themes of kindergarten—seasons, apples, holidays, authors, animals, farms, etc.—and teach them through the framework of Georgia agriculture. Kindergarteners take several field trips throughout the year to support their learning, including visiting the National Schoolhouse at the Georgia National Fair, a tree farm, the Museum of Arts and Sciences, Go Fish Georgia, Dickey Farms, as well as other trips as they become available. In addition, several visitors come to the Kindergarten each year so our students can learn about things like veterinarians, a saw mill, farm equipment, and bee-keeping. Each Kindergarten class has a small class garden for hands-on learning, and does weekly cooking activities. A highlight of each year in Kindergarten is the Wedding of Q & U, held by our Kindergarteners each spring.

In Language Arts, Kindergarteners will…

- Build decoding fluency and reading comprehension skills through research-based phonics program and guided, shared, oral, and independent reading
- Keep a Writers' Workshop notebook to record thoughts and ideas and develop basic writing skills (e.g. spatial awareness in handwriting, phonetic spelling, punctuation, and capitalization, complete sentences)
- Expand and enhance vocabulary through the *Making Meaning* program

In Mathematics, Kindergarteners will…

- Count to 100 by ones, fives, and tens
- Recognize and write numerals form 0-100
- Order whole numbers to 50
- Use objects or drawings to solve addition and subtraction problems up to 10 and story problems
- Measure and compare objects using different tools
- Identify and classify two and three-dimensional shapes
- Create, describe, and extend patterns
- Collect and graph data
- Recognize coins
- Tell time to the hour
- Subitize to 10
- Be introduced to place value

In Social Studies, Kindergarteners will..

- Learn about maps and globes, what they represent, and how we use them
- Recognize and identify rivers, lakes, and mountains—what are they and how are they represented on maps and globes
- Understand and describe the differences between continents and countries
- Study each continent, including maps, animals, culture, people, environment, etc.
- Study Early American History—the Voyage of Columbus in 1492, the Pilgrims, Native Americans, Independence Day, Presidents (past and present), etc.

In Science, our Kindergarteners will…

- Experiment with weekly hands-on experiences
- Discuss and apply the scientific method
- Continue focusing on the habits of mind and language of a science thinker
- Study life cycles and plant anatomy of apples, leaves, nuts, pumpkins, corn, trees, cotton, and flowers
- Study life cycles and anatomy of bats, spiders, turkeys, sheep, butterflies, ladybugs, bees, worms, and frogs (balance of nature)
- Study textiles—wool, cotton, and silk
- Learn about My Plate Nutrition, including classification of fruits, vegetables, grains, proteins, and dairy foods
- Learn about the weather
- Learn about water ecosystems: fresh vs. saltwater habitats
- Learn and practice measurement through cooking
- Practice classification, observation, making predictions, making hypotheses

- Learn about states of matter through cooking and water cycle
- Understand how animals and plants provide resources for our daily lives
- Classify mammals and oviparous animals
- Garden on site, learning about the parts of plants and the growing cycle
- Observe and participate in incubating chicken eggs through the hatching process

In addition to all of these core academic areas, all of our Preschool students are enriched through Spanish, Art, Music, and Physical Education each week.

In Spanish, Preschoolers will…

- Be exposed to and begin to sing songs in Spanish
- Be exposed to and begin to use basic vocabulary and identify various objects using Spanish (days of the week, months of the year, pets, farm animals, zoo/jungle animals, colors, numbers 1-10, fruits and vegetables, weather, shapes, holidays, and culture words, etc.)
- Be exposed to and begin to name the objects they are studying in class
- Create crafts from Spanish culture

In Visual Arts, Preschoolers will…

- Begin to attend to visual details of objects and images
- Identify the colors of the color wheel
- Use various tools and techniques to create art projects
- Learn to cut with scissors in a straight line and to tear paper
- Be exposed to and begin to use basic art vocabulary (artist, media, tools, techniques, etc.)

In Music, Preschoolers will…

- Sing, play, create, and listen to music in various forms
- Explore rhythm, melody, harmony, form, and expressive qualities of music
- Perform for an audience in the Thanksgiving Pow Wow and the Grandparents' Day program

In Physical Education, Preschoolers will…

- Work on fine and gross motor development
- Learn how bodies move
- Take turns and work as a team
- Be introduced to basic loco-motor skills (e.g. walk, run, hop, slide, jump, skip)
- Learn how to move within their physical space
- Develop greater body control
- Participate in stretches and exercises
- Participate in simple organized games
- Manipulates various types of equipment to reinforce skill development

THE LOWER SCHOOL

The Lower School at Stratford consists of 1st through 5th grades, and is housed in the beautiful Cantrell Lower School building. With a focus on STEM and integrated technology, students also have the opportunity to participate in Quiz Bowl and Math Team and the Destination Imagination Team. Students from first grade through fifth grade play on the Chess Team, and a large number of lower school girls and boys participate in our year-long after school Creative Movement classes. Lower schoolers have the opportunity to participate in Eagle Explorations after school, where faculty members and community members offer special classes after school in many areas, such as dance, sewing, guitar, and tennis. The Lower School puts on an annual Holiday production in December that is always very enjoyable! All of the Lower School students also perform at Grandparents' and Special Friends' Day each year. The Lower School Talent Show is always a big hit each Spring, and Field Day rounds out the year in May!

FIRST GRADE

First Graders mark their move to the Lower School with several changes in their daily activities, including eating in the cafeteria and taking STEM classes as an additional enrichment. Field trips for First Graders include a trip to the Strawberry Patch and Twin Oaks Farm.

In Language Arts, First Graders will…

- Learn and apply letter sounds, spelling rules, and phonics through research-based instruction
- Develop and write various pieces of writing in Writers' Workshop while concentrating on basic writing and language skills
- Build on reading accuracy, vocabulary, and reading comprehension skills using oral reading, guided reading, shared reading, and independent reading during Readers' Workshop

In Mathematics, First Graders will…

- Count and write numerals to 120
- Use and apply concrete, pictorial, and abstract strategies to solve number bond families to 20
- Recognize place value from ones to hundreds
- Recognize and count coins of various values
- Create, read, and interpret data from graphs and tables
- Tell time to the hour and half hour
- Recognize the attributes of two- and three-dimensional shapes
- Use standard and nonstandard units to measure
- Use a variety of strategies to solve word problems using numbers to 20

In Social Studies, First Graders will…

- Learn to work with various maps, globes, and other geographic tools
- Explore early people and civilizations, including Ancient Egypt, the Mayans, the Aztecs, and the Incas
- Study the American Revolution moving from colonies to Independence
- Investigate and discuss current events and develop an increased awareness of special days and holidays and their origins

In Science, First Graders will…

- Explore the marvel of the human body; planets; electricity; completing a circuit; and measuring
- Author their own *My Science Journal* with writings and pictures of lessons
- Visit the Museum of Arts and Sciences Planetarium and Science on a Sphere.
- Conduct research using online resources

In Spanish, First Graders will…

- Give and receive greetings and introductions
- Count and give age
- Identify colors
- Identify and locate classroom materials

In Visual Arts, First Graders will…

- Explore a variety of art media through the framework of communication, production, cultural context, history, judgement, criticism, and aesthetics
- Use various tools and techniques to create art
- Explore space, shape, line, color, and dimension
- Be exposed to and begin to use appropriate art vocabulary

In Music, First Graders will…

- Sing, play, create, and listen to music in various forms
- Explore rhythm, melody, harmony, form, and expressive qualities of music
- Perform for an audience in the Holiday Program and the Grandparents' Day program, as well as Fantastic Friday performances for the Lower School

In Physical Education, First Graders will…

- Learn the importance of fitness in daily life
- Participate in a 5-minute walk/run
- Participate in a variety of stretches and exercises
- Be taught basic technique of various skills (e.g. catching, kicking, dribbling, and dancing)

SECOND GRADE

Second Graders add an additional STEM class and begin more intensive world language instruction. The Second Graders take a field trip to the Georgia Aquarium in Atlanta each spring.

In Language Arts, Second Graders will…

- Apply comprehension skills and identify strategies needed to read and understand fiction and nonfiction texts
- Produce a variety of written pieces using the Writers' Workshop method, including applying conventions of standard language and grammar
- Understand and apply standard rules of phonics to spell grade-level appropriate words in daily work

In Mathematics, Second Graders will…

- Quickly retrieve number bond families
- Solve simple word problems
- Understand place value concepts through the hundreds place
- Use mental math, critical thinking, and problem solving skills
- Work with equal groups of objects to gain foundations for multiplication
- Relate addition and subtraction to measurement

In Social Studies, Second Graders will…

- Use and construct maps, globes, and other geographic tools to locate and derive information about people, places, and environments.
- Venture through the ancient civilizations of Greece, and explore the continents of Asia and South America
- Identify different symbols of our country and explore the idea of citizenship and its importance to the citizens of a nation
- Learn about important figures of the Native Americans, American Civil War and the Civil Rights Movement, and the westward expansion of pioneers

In Science, Second Graders will…

- Read for comprehension utilizing a non-fiction textbook and other supplementary material
- Visit WMAZ –TV during the midday show to meet the meteorologist and see how the weather report is gathered and reported

In Spanish, Second Graders will…

- Give and receive formal and informal greetings and introductions
- Count and use numbers out of order
- Use colors to describe
- Identify and describe classroom materials
- Use the calendar

In Visual Arts, Second Graders will…

- Explore a variety of art media through the framework of communication, production, cultural context, history, judgement, criticism, and aesthetics
- Use various tools and techniques to create art
- Explore space, shape, line, color, and dimension
- Be exposed to and begin to use appropriate art vocabulary

In Music, Second Graders will…

- Sing, play, create, and listen to music in various forms
- Explore rhythm, melody, harmony, form, and expressive qualities of music
- Perform for an audience in the Holiday Program and the Grandparents' Day program, as well as Fantastic Friday performances for the Lower School

In Physical Education, Second Graders will…

- Deepen understanding of basic fitness concepts
- Continue refining basic athletic skills

- Participate in more complex group activities focusing on teamwork, strategies, and sportsmanship

THIRD GRADE

Third Grade is the final year that students are in self-contained classes for their core academic subjects. Third graders begin to participate in book studies, and complete units about several chapter books throughout the year. They take field trips to the Ocmulgee Indian Mounds, Dauset Trails, and the Museum of Arts and Sciences in conjunction with their social studies and science lessons as well as attend the Grand Kids series of plays at the Grand Opera House.

In Language Arts, Third Graders will…

- Participate in a workshop approach to learning to create a variety of pieces applying writing strategies, standard grammar, and producing a finished product using the writing process
- Read a variety of grade level texts both fiction and nonfiction based on student choice and novel studies applying reading strategies and gaining fluency, accuracy, and comprehension
- Develop an increased vocabulary and apply knowledge to everyday speech, writing, and reading comprehension
- Study spelling patterns
- Study parts of speech and other grammatical rules

In Mathematics, Third Graders will…

- Use place value understanding and properties of operations to perform multi-digit arithmetic
- Understand concepts of area and relates area to multiplication and to addition
- Understand, compare, add, and subtract fractions
- Represent data using a variety of tables, diagrams, and graphs
- Apply addition, subtraction, multiplication, and division in problem solving
- Apply measurement using standard and metric systems
- Classify two-dimensional shapes based on the geometrical attributes
- Fluently add and subtract
- Understand the properties of multiplication and the relationship between multiplication and division

In Social Studies, Third Graders will…

- Studies timelines to understand early world civilizations and the settlement of North America
- Applies geographical terms and identifies different landforms while continuing to develop map skills Learns about and discusses the early civilizations of the world with emphasis on Ancient Rome and the Vikings
- Investigates how the earliest Americans journeyed into North America by crossing the "Land Bridge," and understands the early exploration of North American by European explorers and understands the early exploration of North America and identifies important North American explorers
- Applies knowledge of the settlement of the Thirteen Colonies to understand life and times before the American Revolution

In Science, Third Graders will…

- Study Chemistry, Biology, and Physics using the authentic tools of science focusing on safety and proper laboratory procedures
- Be introduced to the Periodic Table of Elements and its organization
- Visit an Upper School science lab to flame test chemicals and to silver microscope slides to build a kaleidoscope
- Complete a group project about animals and ecosystems incorporating classifying characteristics, binomial nomenclature, and ecosystem details
- Visit the Museum of Arts and Sciences in conjunction with the animal project
- Display animal projects at the Museum of Arts and Sciences
- Explore electricity, light, and sound through hands-on experiments

In Spanish, Third Graders will…

- Focus on basic conversation in Spanish
- Talk about their likes, dislikes, and feelings
- Give their school schedule, tell time, and talk about important dates

- Reinforce math curriculum in Spanish
- Complete a cross-curricular cultural activity with Computer Class

In Visual Arts, Third Graders will…

- Explore a variety of art media through the framework of communication, production, cultural context, history, judgement, criticism, and aesthetics
- Use various tools and techniques to create art
- Explore space, shape, line, color, and dimension
- Be exposed to and begin to use appropriate art vocabulary
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In Music, Third Graders will…

- Sing, play, create, and listen to music in various forms
- Explore rhythm, melody, harmony, form, and expressive qualities of music
- Perform for an audience in the Holiday Program and the Grandparents' Day program, as well as Fantastic Friday performances for the Lower School

In Physical Education, Third Graders will…

- Become aware of how the body is affected by different intensities of exercise
- Practice basic skills used in sports
- Participate in team building activities in small groups

FOURTH GRADE

Fourth Grade is the first year at Stratford where classes are departmentalized. Students learn a new sense of responsibility as they must manage their materials and day in a new way. Fourth grade is the first year that students can participate in Math Team and Quiz Bowl. Students get to take both Spanish and French in World languages during their fourth grade year. The entire Fourth Grade travels to Tybee Island, GA for an overnight stay at the Burton 4H Center.

In Language Arts, Fourth Graders will…

- Engage in discussion and study of novels to develop specific reading skills and an understanding of literary elements
- Develop increased vocabulary through reading and word study
- Develop and apply proper use of standard grammar and mechanics through expository, narrative, research, persuasive, and poetry writing
- Create written and oral presentations using various media/technology

In Mathematics, Fourth Graders will…

- Use the four operations with whole numbers to solve problems
- Understand factors and multiples
- Use place value understanding and properties of operations to perform multi-digit mathematics
- Extend understanding of fraction equivalence and ordering
- Perform calculations with whole numbers and fractions
- Understand decimal notations for fractions, and compares decimal fractions
- Draw and identify lines and angles
- Represent and interpret data
- Generate and analyze patterns

In Social Studies, Fourth Graders will…

- Have an increased awareness of geographical locations and their effects on history.
- Explore the history of Europe, from the fall of the Rome, the Dark Ages, Feudalism, to the major events of the Middle Ages leading up to the Renaissance
- Undertake a detailed study of the cause and effect relationship of the American Revolution as it leads to the signing of the Declaration of Independence and a new Constitution
- Understand that historical figures made impassioned speeches to support causes in which they believed, and the historical context in which these speeches were made

In Science, Fourth Graders will…

- Use common science tools for inquiry activities that continue to develop scientific method and processing skills
- Compare the role of organisms and the flow if energy within ecosystems
- Research facts about our sun and if effects on life on Earth and changing weather patterns
- Compares interactions of forces to motion and their effects on simple machine systems
- Use the engineering design process to collaborate within groups for the construction of a compound machine that solves a problem
- Extend hands-on environmental studies through an overnight field trip to the Burton 4H Center at Tybee Island

World Languages

In Spanish, Fourth Graders will…

- Conduct a basic introductory conversation
- Ask and answer questions about their family and themselves
- Talk about their food and eating habits, with a recipe project
- Complete a cultural country project

In French, Fourth Graders will…

- Conduct a basic introductory conversation
- Give their school schedule, tell time, and talk about important dates

- Identify and locate classroom materials
- Complete a cultural country project about France

In Visual Arts, Fourth Graders will…

- Explore a variety of art media through the framework of communication, production, cultural context, history, judgement, criticism, and aesthetics
- Use various tools and techniques to create art
- Explore space, shape, line, color, and dimension
- Be exposed to and begin to use appropriate art vocabulary

In Music, Fourth Graders will…

- Sing, play, create, and listen to music in various forms
- Explore rhythm, melody, harmony, form, and expressive qualities of music
- Perform for an audience in the Holiday Program and the Grandparents' Day program, as well as Fantastic Friday performances for the Lower School

In Physical Education, Fourth Graders will…

- Work on building endurance to participate in increasingly longer runs
- Participate in sport specific activities
- Participate in team building activities in small and large groups

FIFTH GRADE

Fifth Grade is the first year that students may participate in the band. Fifth Graders change classes and may campaign to serve on the Fifth Grade Council. Fifth graders continue their World Language study of both French and Spanish. The entire Fifth Grade class takes an overnight trip to Columbus, GA to participate in science, social studies, and art activities.

In Language Arts, Fifth Graders will…

- Utilize the writing process to produce a variety of genres, including personal narratives, opinions writing, persuasive writing, research, character analysis, and descriptive writing
- Demonstrate the conventions of standard English grammar and usage when writing and speaking
- Engage in novel studies to gain meaning of, appreciate and respond to literature while incorporating new vocabulary
- Use technology to support learning both at home and school

In Mathematics, Fifth Graders will…

- Perform calculations with whole numbers, fractions, and decimals and apply these skills in problem solving
- Understand and use equivalent fractions for solving complex mathematical problems
- Apply divisibility rules to factoring large numbers
- Understand and use exponents with place value and prime factorization
- Apply the order of operations to complex mathematical expressions
- Understand and use both metric and standard units of measurement
- Use formulas to find the perimeter, circumference, area, and volume of geometric figures
- Graph points on the coordinate plane to solve real-world and mathematical problems
- Collect, organize, analyze, and graph data

In Social Studies, Fifth Graders will…

- Recognize the spatial sense of the world by reviewing map and globe skills and geography topics as it relates to history
- Understand the development of early American civilizations and Native American cultures through primary and secondary resources.
- Investigate the causes and effects of European exploration, the Renaissance, and the Reformation
- Explore Westward Expansion in the United States before the Civil War and recognizes the causes, conflicts, and consequences of the Civil War

In Science, Fifth Graders will…

- Explore the scientific method and engineering design process through a six-week study of bacteria
- Discover how cells come together to form body systems with an emphasis on the nervous system and concussions
- Begin to explore genetics by creating and executing Punnett squares
- Study atomic structure, the periodic table, and physical and chemical properties and changes
- Engage in the study of living things and other STEAM topics through and overnight trip to Columbus, GA

World Languages

In Spanish, Fifth Graders will…

- Describe self and others
- Talk about where they live and how to get there
- Identify and describe clothing with a fashion project
- Complete a cultural country project

In French, Fifth Graders will…

- Describe self and others
- Ask and answer questions about their family and themselves
- Explain their likes, dislikes, hobbies, and activities
- Complete a cultural country project about Canada

In Visual Arts, Fifth Graders will…

- Explore a variety of art media through the framework of communication, production, cultural context, history, judgement, criticism, and aesthetics
- Use various tools and techniques to create art
- Explore space, shape, line, color, and dimension
- Be exposed to and begin to use appropriate art vocabulary
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In Music, Fifth Graders will…

- Sing, play, create, and listen to music in various forms
- Explore rhythm, melody, harmony, form, and expressive qualities of music
- Perform for an audience in the Holiday Program and the Grandparents' Day program, as well as Fantastic Friday performances for the Lower School

In Physical Education, Fifth Graders will…

- Set individual goals for muscular strength, muscular endurance, cardiovascular endurance, and flexibility
- Learn strategies associated with various sports and games

THE MIDDLE SCHOOL

The Middle School at Stratford Academy consists of the 6th, 7th, and 8th grades. Students in each grade level participate in unique transitional activities as they move from grade to grade. There is an active Middle School Council made up of students elected by their peers that helps plan special activities and community service activities for the Middle School students. Middle school students have a Winter Fest celebration in December, and in May they have a fabulous Field Day and a themed Middle School Dance.

SIXTH GRADE

Sixth graders at Stratford begin to learn about Middle School and its expectations at the end of 5th grade when they get to visit and shadow with 6th grade classes. The 6th grade teachers and principal work closely with the 5th grade teachers and principal to provide a smooth social, emotional, and academic transition from Lower School to Middle School. The 6th graders start the year with a bonding/team building experience off campus at a ropes course. Sixth graders are introduced to the works of Shakespeare and get to take their science classes in the Science Center for lab-based science work. They take a field trip to the Georgia Renaissance Festival and have Civil War reenactors visit campus at the end of the year as a preview for 7th grade American History.

In Language Arts, Sixth Graders will…

- Analyze and annotate grade appropriate texts using more advanced literary elements
- Prepare and produce written and oral presentations using technology with a focus on body language, time constraints, and the written word
- Develop and utilize higher level assortment of grammar and editing skills and create writing for a variety of audiences
- Identify and interpret higher level vocabulary, with emphasis on synonyms, antonyms, parts of speech, and etymology

In Mathematics, Sixth Graders will…

- Understand concepts of ratio and unit rates and use ratio reasoning to solve problems
- Apply and extend previous understandings of multiplication and division with fractions and decimals
- Multiply and divide multi-digit numbers and find common factors and multiples
- Apply and extend previous understanding of numbers to the system of rational numbers
- Understand and apply mathematical properties to solve problems
- Apply and extend previous understandings of arithmetic to algebraic expressions
- Begin solving equations using "Hands-On Equations" system
- Understand and apply relationships among shapes using formulas to determine area, surface area, and volume
- Develop understanding of statistical variability and distribution, displaying data on graphs and charts
- Plot points of ordered pairs on coordinate plane and identify the four quadrants

In Social Studies, Sixth Graders will…

- Study world geography and significant artifacts of the world, including Pompeii, the Rosetta Stone, and Stonehenge
- Study the Old and New Stone Ages and ancient history, including fourteen civilizations, with emphasis on Egypt, Rome, and Greece
- Practice critical reading skills, which include finding the main idea of a paragraph and identifying Greek and Latin roots of words; organizational skills which include keeping a notebook and filing art work, tests, and classwork so as to retrieve these in a timely fashion
- Practice note-taking skills, oral expression skills such as classroom recitations, effective writing skills, and research skills using various kinds of technological devices and methods

In Science, Sixth Graders will…

- Incorporate STEM activities into each topic throughout the year
- Investigate the solar system, including the Earth, moon, stars, galaxies, the universe, and space exploration
- Explore continental drift, plate tectonics, volcanoes, and earthquakes
- Examine cells, tissues, organs, organ systems, the digestive system, the heart, and diseases
- Use the 3-D virtual reality ZTech technology to explore each topic
- Dissect a cow's heart
- Produce and present a report about a disease using technology tools to create the presentation

World Languages
In Spanish and French, Sixth Graders will…

- Focus on conversation
- Ask and answer questions about their friends and their activities
- Place an order in a restaurant and describe their favorite foods
- Talk about what they study at school and their school supplies

- Cultural project about South American countries

In Latin, Sixth Graders will…

- Read about a family in Roman Britain
- Name and describe animals
- Name body parts
- Use Roman numerals to express dates
- Understand the gender of nouns

In Visual Arts, Sixth Graders will…

- Identify, learn about, and apply each element of art separately and then in a cumulative project at the end of the course
- Learn about artists from the past and their styles as well as current artists and their styles
- Be exposed to and gain strength in realistic drawing using varied media
- Experiment with and learn basic animation on the iPad using Animator Creator App

Music

In Physical Education, Sixth Graders will…

- Apply strategies to game settings
- Refine technical skills and broaden sports background
- Increase muscular strength, muscular endurance, cardiovascular endurance. and flexibility
- Participate in Eagle Fitness Testing

SEVENTH GRADE

Seventh Grade

In Language Arts, Seventh Graders will…

- Respond to and evaluate an assortment of texts both independently and collaboratively (including nonfiction and Shakespearean literature)
- Use writing to communicate for a variety of purposes (persuade, inform, entertain, explain) and additionally conduct and compose a cross-curricular (Science/English) research paper using MLA guidelines
- Apply new vocabulary in context incorporating multiple meanings, parts of speech, synonyms, antonyms, and usage
- Demonstrate command of the conventions of standard English grammar and usage, and incorporate them into writing, speaking, and presentations using technology

In Pre-Algebra, Students will…

- Recognize and apply properties of real numbers to solve problems
- Perform basic operations with positive and negative integers, fractions, and decimals
- Solve one-step linear equations with multiple types of numbers
- Express ratios as fractions, decimals, and percentages
- Understand and compute probabilities and odds
- Apply ratios, proportions, and scale factors to solve problems
- Convert units within and between metric and standard units

In Social Studies/History, Seventh Graders will…

- Study the creation of a new government for a new country formed from English colonies
- Develop reading skills by making inferences form written documents, summarizing, identifying and sequencing major historical events, analyzing information for comparative purposes
- Investigate how agricultural and textile industries developed during the 19th century, including the Civil War and Industrial Revolution
- Interview an elderly family member to learn about personal family history, including a written component which is delivered in an oral presentation to their class

In Science, Seventh Graders will…

- Identify conditions unique to Earth that allow organisms to live and evolve
- Use basic chemistry to identify the four groups of organic molecules and how they are used in living systems, and identify organic chemicals in food
- Identify prokaryotic and eukaryotic cell structures and their functions and explore viral reproductive cycles
- Compare microscopic examination of cells through homeostasis activities
- Explore photosynthesis, respiration, fermentation and the interconnectedness of their roles in providing energy for life on Earth
- Ferment bread dough, study gas production in elodea, and examine leaf cross-sections
- Identify the differences between asexual and sexual reproduction, mitosis and meiosis, the role of genetics, DNA and protein synthesis
- Extract DNA and illustrate meiosis and mitosis
- Identify how genetics and natural selection work together as organisms evolve, examining Macro/micro evolution, gradualism, punctuated equilibrium, coevolution, convergent
- Complete the classification of candy lab
- Dissect flowers, fungi, sponges, starfish, and frogs
- Complete an animal research paper

World Languages
In Spanish and French, Seventh Graders will…

- Compare their classroom to a Haitian or Cuban classroom
- Describe a resident of Versailles or the Palace of Madrid and their daily activities
- Describe events and festivities at the Carnaval de Quebec or the Carnaval of Colombia and create their own festival

- Discuss Olympic events and athletes and imagine a trip to the Olympics
- Make a film about the Olympics for the Stratford International Film Festival

In Latin, Seventh Graders will…

- Read about a family in the city of Pompeii and identify the rooms in their home and the major sites of Pompeii
- Discuss and understand the proper etiquette of the Roman baths
- Explain the Roman political process and create a poster for a political candidate
- Research and create a project about a constellation and its mythology
- Make a film about the Olympics for the Stratford International Film Festival

Visual Arts

Music

In Physical Education, Seventh Graders will…

- Applying technical skills to team strategies
- Competing at a higher level and showing good sportsmanship, cultivating leadership qualities.
- Improve muscular strength, cardiovascular stamina, and speed
- Participate in Eagle Fitness Testing

EIGHTH GRADE

Eighth Grade

In Language Arts, Eighth Graders will…

- Explore a variety of genres such as nonfiction, coming of age, Shakespeare, and dystopian fiction
- Create, revise, and publish five-paragraph essays and a variety of oral and technological projects exploring major literary elements from class readings
- Enhance grammar development and mastery through writing
- Master vocabulary in novels, plays, short stories, and nonfiction works

Mathematics

In Social Studies/History, Eighth Graders will…

- Examine how imperialism connects with the events of the Spanish American War, World War I, World War II, and the Cold War
- Explore direct events that happened in the United States during the 1900s, such as the Jazz Age, the Great Depression, the New Deal, and the Civil Rights Movement
- Understand the formation of the US government and how it functions throughout the year
- Travel to Washington, D.C.

In Science, Eighth Graders will…

- Study SI Measurements and Metric Conversion
- Study matter, atomic structure, solutions, and acids and bases
- Complete multiple intelligence phases of matter project and pH labs
- Study chemical compounds: ionic, covalent, and organic bonding, formulas, and nomenclature, chemical reactions, build models of compounds
- Complete stoichiometry single replacement lab
- Study radiation in the scientific world
- Complete model of isotopes lab
- Study Motion and Forces
- Complete roller coaster lab
- Study Mass, Volume, Density Calculations and Labs
- Complete law of conservation of mass lab
- Research of Radiation in the Scientific World (medical, energy, warfare, historical)

World Languages
In Spanish and French, Eighth Graders will…

- Give the biography of a famous fashion designer using the past tense
- Order in a restaurant, identify stores and products in a marketplace, and act as a vendor in the marketplace
- Give directions around Casablanca or Buenos Aires and act as a travel agent for the city
- Talk about the pirate life, both past and present, imagine the pirates of the future,
- Make a film about piracy for the Stratford International Film Festival

In Latin, Eighth Graders will…

- Express commands, wishes, and hopes
- Discuss ancient science, medicine, and mythology
- Act as a travel agent to famous ancient sites
- Create biographies of early Roman emperors
- Make a film about piracy for the Stratford International Film Festival

Visual Arts

Music

In Physical Education, Eighth Graders will…

- Emphasize game organization, formations, team strategies
- Work on problem solving and team collaboration

- Continue to improve muscular strength, cardiovascular stamina and speed.
- Participate in Eagle Fitness Testing

THE UPPER SCHOOL

The Upper School at Stratford Academy is made up of 9th, 10th, 11th, and 12th grades. The Student Activities Board is made up of Seniors elected by their classmates. The SAB plans events for all of the Upper School. A variety of academic and social clubs and activities are available for students outside of their classes. In the fall there is a Homecoming Dance. There is also a Sadie Hawkins Dance in February and Prom for all for the Juniors and Seniors in April. All Stratford Upper School students complete yearly community service hours through "Stratford Out Serving."

ENGLISH

9th Grade English students will…

- Use a wide range of philosophies in argumentative writing and persuasive speaking
- Study a variety of fiction and drama and develop proficiency in analyzing literature and literary devices
- Write in many styles for a variety of audiences
- Create multimedia including film, gaming, and web design
- Promote digital literacy and engagement with multimedia
- Reinforce evaluation and proper use of external sources
- Enhance grammar skills through writing
- Develop organizational skills

10th Grade College Prep English students will…

- Analyze literature to explain how authors employs literary elements to convey meaning
- Engage with non-fiction texts to identify rhetorical strategies
- Apply rhetorical strategies to argumentative writing and speaking
- Bolster evaluation and proper integration of external sources
- Advance organizational skills
- Expand ability to identify literary devices through connection to purpose of a text
- Reinforce grammar skills through writing
- Engage in persuasive argument while integrating external sources
- Deliver formal persuasive speech
- Utilize technology in a variety of ways

10th Grade Accelerated English students will…

- Explore and analyze world literature to promote cultural awareness and understanding
- Compose analytical and creative pieces of writing to develop their own writer's voice and to increase the ability to craft sophisticated arguments
- Utilize multimedia platforms to collaborate with peers and enhance their understanding of global citizenship
- Learn about a variety of world cultures through literature and class discussion
- Engage students in all stages of the writing process: planning drafting, revising, editing, publishing
- Engage students in collaborative discussions on age-appropriate subjects
- Structure and develop multi-paragraph essays
- Develop research skills, specifically finding and using quotes from outside sources to support an argument

11th Grade College Prep English students will…

- Explore the ways the students see the world (their individual context) affect the way they read to new information and interpret piece of writing
- Examine writer's assumptions and work to become aware of hidden argument flaws in the world around us.
- Connect to American literature from a variety of background and time periods using Readers response theory
- Practice growing as a writer, both in slick and content level, through use of a writer's response journal (place to collect their personal responses
- Support claims using specific evidence from the text while at the same time reflecting opposing arguments
- Find errors in their own written work as they begin to realize what they, personally need to work on as an author
- Develop the ability to ask deep questions, both about the reading and about arguments made in discussions without having teacher-made lists to guide their exploration
- Compose written and spoke responses to questions in a timed situation with out preparation (think on their feet)
- Evaluate research and use it in arguments to convince an audience and expand their understanding of a test
- Collaborate with peers to find solutions to problems posed during discussion

11th Grade AP English students will…

- Analyze a writer's choice and judge the effectiveness of those choices on a particular audience
- Evaluate the argument techniques authors use to convince audiences and assess the logic behind the argument

- Formulate their own argument which include a variety of techniques in order to sway an audience to their beliefs
- Modify a published author's original piece, modeling their devices so that they can practice different rhetorical approaches
- Creates original pieces of writing, both creative and analytical, for a variety of purposes, such as to explain, to describe, to narrate, and to persuade
- Differentiate between effective and ineffective writing, based on authors purpose and audiences needs
- Enhances their writer's voice by continuing to punch themselves to grow and develop by modeling and taking risks
- Collaborate with peers to create surveys, do research. And reach conclusions about the information they gather
- Test out their writing by sharing it in small groups as well as in "publishing" areas, such as google docs., gaining feedback on how their work more effective
- Explore in depth texts, visual representation, speeches, etc. and debate the meaning and effectiveness of such pieces
- Apply all writing and analytical skills learned in previous classes, working to increase their abilities in both sophistication and complexity

12th Grade College Prep English students will…

Senior Humanities students will…

- Learn to use a college textbook, distinguishing between essential and non-essential information
- Become facile in explaining the development of Western thought from antiquity through modern times
- Interpret metaphors and allusions from Western thought and applies them to modern culture
- Complete a 4000-word treatise demonstrating skill in extracting broad themes from diverse belief systems while identifying a personal preference with rational support and conforming to MLA style
- Demonstrate competence with presentation best practices, turn-it-in.com, and electronic communication etiquette

12th Grade AP English students will…

- Study fiction and drama in the context of classical and modern philosophies
- Approach poetry with aplomb instead of fear
- Work creatively to wrote poetry
- Learn to identify use of literary and rhetorical devices in poetry
- Write traditional "College 101/102" essays
- Learn humor theory as it applies to fiction and drama
- Generate long films of the literature we study
- Participate in formal debates
- Compose college-entry essays

Journalism students will…

- Research, interview, report, and write stories
- Generate story ideas by observing and being curious
- Use effective and responsible platforms of communication with a primary emphasis is on writing news and feature stories, which appear on *The Gazebo* newspaper website at www.stratfordgazebo.com
- Learn to take photographs and shoot video
- Deliver and promote articles through social media such as Twitter, Facebook, Snapchat, and Instagram
- Learn to be fair, balanced, and objective in their news-gathering and reporting to understand the difference between news and opinion and understand the responsible role of the press in our society

Creative Writing students will…

- Learn what makes a good story and how to tell it so that people will not only read it, but experience it, with a focus on curiosity and imagination
- Spend one month writing about themselves, the subject they know best
- Submit their work for publication in *Scribbles*, the school's literary magazine
- Collaborate on writing stories, play word games, and foster a love for the written word.

MATHEMATICS

The Upper School Math Department at Stratford distinguishes itself from other schools with our small class sizes, high expectations, and traditional, rigorous math curriculum. At each level, there is an emphasis on mastery of topics without dependence on calculators. The Stratford Mathematics faculty strives to include inquiry-based projects and activities when appropriate to demonstrate real world application of mathematical skills. Math help and remediation is available to students at all times during the school day through our Help Desk and tutorial programs. Our success is reflected in our students' outstanding performance on AP exams, as well as the accomplishments of our varsity and junior varsity math teams.

Algebra I students will…

- Solve linear equations and inequalities in one variable
- Compute percentages given real world applications
- Graph and write linear equations in two variables
- Solve systems of equations using multiple techniques
- Perform addition, subtraction, and multiplication with polynomials
- Factor polynomials and solve quadratic equations by factoring
- Simplify radical expressions and solve equations containing radicals
- Perform basic operations with rational expressions and solve rational equations

At Stratford, Geometry is taught at three different grade levels based on the student's interest and ability. At each grade level, students develop an understanding of concepts through a variety of learning activities, including various geometry computer programs, experiential projects, manipulatives, and tried and true paper and pencil. This technique not only deepens the level of understanding, but also requires students to take ownership of the material, effectively teaching the student how to learn.

Geometry students will…

- Identify and understand the building blocks of geometry, including points, lines, planes, and angles.
- Calculate midpoint and distance in the coordinate plane
- Use inductive and deductive reasoning to distinguish patterns and reach sound conclusions from given information
- Master concepts of congruence and similarity in triangles, quadrilaterals, and other polygons with 5 or more sides
- Understand and use formulas and techniques for finding area, surface area, and volume.
- Calculate various values related to circles, including circumference, arc length and area of sectors and segments
- Solve problems using right triangle trigonometry

Algebra II students will…

- Review and delve deeper into Algebra 1 concepts
- Solve compound inequalities
- Solve absolute value equations and inequalities
- Use function notation and perform operations with functions
- Simplify expressions with radicals and rational exponents
- Graph systems of linear inequalities
- Operate with complex numbers
- Solve quadratic equations and inequalities
- Graph quadratic functions
- Recognize whether growth is linear or exponential
- Use exponential functions to model real life situations
- Solve rational and radical equations
- Graph transformations of the library of functions
- Write the equation of a circle given properties of the circle

College Algebra students will…

- Solve linear, quadratic, absolute value, and radical equations
- Solve problems by modeling data using linear and quadratic regression
- Determine zeros of polynomial functions by applying the Rational Root Theorem and division

- Use the Remainder Theorem to evaluate functions
- Analyze the graphs of polynomial functions
- Solve problems by modeling data using logarithmic and exponential equations

Pre-Calculus students will…

- Identify subsets of the set of real numbers
- Review and delve deeper into Algebra 2 concepts, including rational expressions, radicals and complex numbers, and graphs from the library of functions
- Graph and analyze quadratic, polynomial, rational, exponential, and logarithmic functions
- Solve polynomial equations of degree 'n'
- Derive the six trigonometric functions using geometry
- Use the unit circle to identify trigonometric function values
- Solve trigonometric equations and proves trigonometric identities
- Graph trigonometric functions
- Solve practical applications using trigonometry
- Use basic permutations and combinations to solve problems
- Solve basic probability problems

Trigonometry students will…

- Compute the measure of angles in degrees with decimals, degree-minute-second, and using radian measure
- Graph all six trigonometric functions and their inverses
- Apply identities to simplify trigonometric expressions or verify other identities
- Solve for missing angles or sides of right triangles and non-right triangles by applying trigonometric functions or the Laws of Sines and Cosines

Statistics students will…

- Analyze different types of sampling methods
- Recognize types of data based on characteristics
- Compute and understand descriptive statistics
- Apply properties of probability to solve problems
- Model data using linear regression
- Use binomial and normal probability distributions to solve problems
- Understand the Central Limit Theorem

AP Statistics

The purpose of the AP® Statistics course is to teach the students how to collect, analyze, and draw conclusions from data. The first semester covers descriptive statistics in which the student will…

- Collect data with sample surveys, experiments, and observational studies
- Summarize and interpret a set of data
- Explain the relationships between two variables
- Anticipate patterns by looking at random phenomena using probability and simulation

During the second semester, students learn about inferential statistics which uses probability theory to deduce the properties of a population from the analysis of the sample data drawn from the population.

- Use confidence intervals for proportions and means
- Test hypotheses about proportions and means
- Use linear regression to examine the relationship between two quantitative variables

AP Calculus AB students will…

- Compute limits numerically, algebraically, and graphically
- Determine the derivative of a relation to find the rate of change or slope of the tangent line
- Connect the graphs of $y=f(x)$, $y=f'(x)$, and $y=f''(x)$ using properties of derivatives, limits, and continuity
- Apply differentiation for optimization, related rates
- Apply integration to find areas, volumes, and net change
- Compute derivatives and integrals from tables, graphs, and implicit functions

AP Calculus BC students will…

- Apply Newton's Method and Euler's Method to approximate solutions numerically
- Model the derivatives of exponential growth and logistical growth
- Use L'Hopital's Rule to calculate limits in indeterminate form
- Integrate using partial fraction decomposition, substitution, and integration by parts

- Evaluate improper integrals
- Approximate transcendental functions using Taylor Series polynomials and power series
- Determine the radius of convergence and error for a Taylor Series Polynomial

HISTORY

Using a "big history" approach, the 9th and 10th grade social studies offerings integrate models and findings from history and the social and natural sciences to provide students with a comprehensive and interdisciplinary overview of the major trends and themes in the history of humanity and human's interaction with the natural environment.

Course options in 9th grade include World Geography and Economics, and AP Human Geography.

AP Human Geography students will…

- Understand and appreciate spatial and temporal aspects of human activities
- Develop and apply models to social science problems and issues
- Test the validity of modes through field experiences
- Effectively communicate skills and knowledge in both oral and written modes using a variety of media

Geography students will…

- Experience an urban emersion field experience involving research, exploring and mapping Macon urban patterns
- Present multimedia presentations applying skills in analyzing the development, cultural patterns and diversity, and economy of a country

Economics students will…

- Conduct budget management simulation, banking and loans, and stock analysis
- Create a portfolio on planning and starting a business

Course options in the 10th grade include World History and AP World History.

World History and AP World History students will…

- Effectively organize, analyze, evaluate, and synthesize, information from a variety of sources (charts, graphs, maps, art, cartoons, primary and secondary scholarly writing) in both written essays and oral presentations
- Analyze primary and secondary sources, seeing thematic changes over time, recognizing the point of view of the authors of documents, and how culture, social position, and time period affect the sources
- Appreciate art and music as reflections of the ages
- Participate in a variety of group projects that integrate history, archeology, sociology, anthropology, politics, economics, and elements of the natural sciences

Collaborating with the American Literature offering from the English department, the 11th grade social studies takes an American studies approach. Classes are interdisciplinary, incorporating common themes (ex. Interpreting the American Dream) and common assignments. Course offerings in the 11th Grade include AP American Studies and College Prep American Studies.

College Prep American Studies and AP American Studies students will…

- Analyze primary sources and evidence and make historical connections
- Create and support a historical argument
- Understand historiography/identify scholarly arguments
- Complete a local history project

There is no 12th grade social studies course requirement. A variety of semester and year-long electives are offered including: world cultures, Holocaust, international relations, economics, government and politics, AP Options (Economics, European History, Human Geography, Comparative Government and Politics, US Government and Politics)

SCIENCE

9th Grade Biology students will…

- Study biochemistry
- Study cell structure & function
- Study human reproduction
- Study respiration & photosynthesis
- Learn about molecular and biochemical processes
- Understand cellular processes related to structure, function, and division
- Study genetics and patterns of inheritance
- Explore evolution of taxonomic classification with an emphasis on plant and animal kingdoms
- Develop independent observation skills and data analysis skills
- Be able to synthesize and apply concepts
- Collaborate in a group in a laboratory setting
- Make observations, and record and analyze data
- Complete gel electrophoresis
- Conduct group and independent research

10th Grade Chemistry

- Study atomic theory and structure
- Explore principles of bonding and chemical reactions
- Study properties of phases of matter and energy changes associate with phase changes
- Work with solutions, including acid-base chemistry
- Complete extensive mathematical problem solving to reinforce theory
- Learn to use a variety of laboratory equipment and technology to gather and analyze data

10th Grade Accelerated Chemistry

- Study atomic theory and structure
- Explore principles of bonding and chemical reactions
- Study properties of phases of matter and energy changes associate with phase changes
- Work with solutions, including acid-base chemistry
- Complete extensive mathematical problem solving to reinforce theory
- Learn to use a variety of laboratory equipment and technology to gather and analyze data
- Complete units about equilibrium, electrochemistry, and thermochemistry

Physics students will..

- Study forces and motion
- Learn about work, power, and energy
- Explore electricity, circuits, and optics
- Complete engineering projects (design/build) including rocket launch, center of mass, and projectile launch
- Use a variety of software to collect and analyze data

Environmental Science students will…

- Study community and population ecology including various studies of population dynamics
- Study food, soil and pest managements
- Explore water resources and pollution, including student driven water quality assessment
- Explore energy resources
- Explore environmental hazards and human health

Anatomy & Physiology students will…

- Study the skeletal system and the muscular system
- Study the integumentary system, the nervous system, and special senses
- Study the endocrine system and the chemistry of hormones
- Study the lymphatic system and body defenses
- Study the cardiovascular system, the respiratory system, and blood
- Study the digestive system and the urinary system

- Study the reproductive system
- Complete dissections, blood typing, and model building
- Participate in the flour baby project
- Visit the Bodies exhibit in Atlanta

Human Genetics students will…

- Study inheritance patterns
- Explore molecular genetics, including nucleic acids, protein synthesis, and genetic engineering
- Explore mutations and a survey of genetic diseases
- Study the genetics of cancer and the immune system
- Use case studies and lab work to refine theory

Diseases of the Human Body students will…

- Participate in class discussions on current topics in the human diseases
- Study general concepts of disease
- Explore communicable diseases, congenital diseases, and hereditary Diseases
- Participate in an in-depth study of cancer
- Explore various case studies on disease

AP Biology students will…

- Study biochemistry and cellular processes
- Explore cell structure, function, and division
- Study molecular biology, genetics, and evolution
- Participate in a survey of kingdoms with an emphasis on plant and animal structure and function
- Complete and overview of the human body systems
- Gather, graph, and interpret data from laboratory experiments

AP Chemistry students will…

- Study atomic structure, quantum theory, and principles of bonding
- Explore reactions, stoichiometry, and chemical kinetics
- Explore phases of matter and solutions
- Study equilibrium and acid/base chemistry
- Explore thermochemistry and electrochemistry
- Solve mathematical problems to reinforce theory
- Collect and analyze lab data using a variety of lab equipment, probeware, and other technology

AP Environmental Science students will…

- Explore ecosystem structure, energy flow, and diversity
- Explore population ecology and human population concepts
- Explore energy resources and consumption
- Explore pollution and its impact on human health
- Design independent experiments to test hypotheses
- Collect and analyze data in various environmental conditions

WORLD LANGUAGES

The World Language Department at Stratford puts a focus on student production and the comprehension of authentic texts. In the Upper School, students have the opportunity to participate in Immersion Weekends, Language Clubs, Latin Convention, and exchange programs. Our students use the language on a daily basis and our modern language courses are taught 90% in the new language, allowing students more exposure to the language. All of our students complete exciting, real-world projects to enhance their understanding of the language and culture.

- Level One
  - Spanish and French
    - Introduce themselves and communicate with their teacher
    - Compare schools and classrooms in other cultures to their own
    - Describe their family
    - Talk about activities for different times and places
    - Describe their home and their chores and compare American homes to homes in other cultures
    - Explain what they like to eat and give directions for how to make it
    - Describe their clothing
    - Give and follow directions
    - Make travel plans for the following summer
  - Latin
    - Explore and describe Pompeii and Alexandria
    - Read, discuss, and compare Greco-Roman houses, customs, entertainment, politics, history, education, and landmarks
    - Produce mythological performances
    - Describe and discuss Egyptian art
- Level Two
  - Spanish and French
    - Describe their regular daily routine
    - Discuss illness or injury and recommend cures, explain health care systems in the target culture
    - Describe common activities at various stages of life
    - Talk about holidays and traditions in their family and other cultures
    - Discuss nature and its inhabitants
    - Explain the technology that they use in their daily life and imagine the world in the future
    - Discuss pop culture and imagine their life as a celebrity
    - Act as a travel agent for a city in a French or Spanish speaking country
  - Latin
    - Perform a mock Roman Senate
    - Examine and use reports and rumors in historical contexts
    - Create biographies of famous Romans
    - Discuss and describe Greco-Roman heroes and the Trojan War
    - Create their own prophecies
    - Learn to describe verbal actions
    - Understand expressions of potential
    - Begin using nuanced uses of noun cases, verbs, and syntax
- Level Three
  - Spanish and French
    - Discuss their future plans and compare differences in the hiring process between cultures
    - Tell a fairy tale
    - Discuss problems in the environment and potential solutions
    - Describe the press and how news is relayed with current events from around the world
    - Compare government systems from other countries
    - Describe famous works of art, explain and imitate a famous artist from the for the World Language Gallery for Stratford's Fine Arts Day
    - Create an ideal country and negotiate with other countries
  - Latin
    - Connect and examine uses of mythology and history for motivations, actions, and desires within native Latin literature

        - Express potential, fear, result, purpose, conditions, encouragement, wishes, necessity, and uncertainty
        - Solve complex mythologically-inspired puzzles using advanced grammar in a role-playing activity.
        - Use advanced poetic meter and terms of prosody
        - Read and write analytical essays about the literature of Catullus and Ovid
- Level Four
    - French
        - Explore French theater and film
        - Explain classical theater conventions
        - Discuss and debate issues of destiny vs. choice, culture vs. individuality, family vs. laws, pacifism vs. violence, nature vs. civilization across the Francophone world
        - Explain various Francophone literary movements (existentialism, absurdism, negritude)
        - Learn to write an analytical essay in French
    - Spanish
        - Discuss and debate current events
        - Write analytical essays using primary source documents
        - Discuss the themes of world challenges, science and technology, modern life, personal and public identities, family and community, and beauty and aesthetics in Spanish speaking countries
    - Latin
        - Engage, explore, and analyze the texts of various Latin authors
        - Discuss the art of translation using Harry Potter in Latin
        - Produce a Latin-speaking newscast
        - Discuss and analyse gender roles using Ovid and Plautus
        - Discuss and analyze Stoicism and Epicureanism using Lucretius
        - Research and explore the development of Medieval Latin using St. Brendan
        - Discuss the political, economic, historical, and educational impetuses for Latin in the modern world.
        - Research and write original research papers

- Advanced Placement
    - French
        - Discuss and debate current events
        - Write analytical essays using primary source documents
        - Discuss the themes of world challenges, science and technology, modern life, personal and public identities, family and community, and beauty and aesthetics in the Francophone world
    - Spanish
        - Explain classical literary conventions
        - Analyze literature, including poetry and theater, through the themes of societies in contact, construction of gender, time and space, interpersonal relationships, duality of self, and literary creation
        - Write analytical essays using literary movements as a historical reference
    - Latin
        - Translate, read, and analyze selections from Caesar and Vergil
        - Write analytical essays using terms of prosody, scansion, and grammar about the Latin selections
        - Create content review movies

THE ARTS

VISUAL ARTS

Intro Art Class
A beginning survey art class where students develop a visual and structural understanding of both 2-D and 3-D art. Students will create a variety of artwork that relates concepts to both the Art Elements and Principles of Design. Areas of concentrations to be addressed throughout the year are:

- Drawing
- Painting
- Collage
- Multi-media
- Some 3D
- Critique Writing
- Art History

Drawing Class
Drawing; the foundation of art! Students will learn how to draw through observational skills in line and value and from the imagination; with an emphasis on composition; Students will explore the Elements of Art and Principles of Design as it relates to drawing. A variety of materials are used, like pencil, colored pencils, charcoal, inks and pastels. Students will be taught how value, light and colors and the composition affect both the artist and viewer's perception of a subject.

Painting
Pre-requisite: Drawing (not always mandatory)
Students will learn how to paint with acrylic, watercolor and possibly Oil paints. Students will develop a visual and structural understanding of approaches to painting with an emphasis on observation, technique, processes and concepts relating to both the Elements and Principles of Design. Students will be exposed to painting color theory and art history into contemporary art ideas in Painting. Through the semester students will develop an awareness of variations in style, content and conceptual considerations.

Photo I
In Photo I students will learn the art form of the Pinhole Camera. Students will build their own camera, take photos from it and develop the black and white photos in the darkroom. Students will learn how to use traditional black and white developing in the darkroom to produce their negatives and turn them into positives. Students will also learn the art of the Photogram and develop a series of prints using traditional methods. This is not a digital camera class and work is the traditional printing of black and white prints.
Student will learn what makes a good composition and how to use the Elements and Principles of art to be a better photographer. Throughout the course students will be exposed to the history of photography as well as various contemporary photographers who have paved a path using this medium.

Advanced Art
Pre-requisite: Drawing and Painting
Advanced Art is for the serious self-motivated student who wants to grow and start developing their own voice in their artwork. Even though this course is meant to be a challenging course that is a pre-req. for AP Studio; it can also be a course that will challenge the student at any level of artistic ability. 3D students can also take this course and work in 3D. Students who want to move onto AP Studio 3D must take this course.
As the year progresses, this course will emphasize more independence. Students will be expected to solve problems more creatively through thoughtful questioning, research, and group critique. Students will draw from their past knowledge to start moving out of their comfort zone, try new materials, explore new themes, and draw from the contemporary world.

Sculpture
Students will explore the three-dimensional art form of Sculpture through media
techniques, studio skills, and researching of historical and contemporary artists for influence and relevance. Students will work with a variety of materials, including but not limited to: plaster, a variety of metals, wire and

wood. Past projects have been: plaster body casting, plaster carving, metal and wire mobiles, and stained glass mirrors. Sculpture techniques, such as modeling, carving, construction and assemblage will be taught in per project.

Ceramics
Students will explore Ceramics, Pottery, through media techniques, studio skills, and the research of historical and contemporary Ceramics Artists. This is a class for handbuilding ceramics not a wheel thrown class (but in the near future there will be availability).
Students will work through a variety techniques in order to create functional and sculptural forms in clay. The majority of the semester will be focused on the fundamental techniques and tools used, glazing procedures and the Hand-Building methods of pinch, modeling, coil, and slab. Some of the projects that will be created in this course are Greek-inspired covered coil vessels, Open Coil Vessels, Animal Relief Plates, Spirit Boxes, and Ceramic Sculptural forms.

AP Studio Art; 2D, Drawing & 3D Portfolios
A college level studio art course that conforms to College Board requirements. For the highly motivated art student who has had the pre-req's for this class and has been accepted into the class. This course is designed to guide students in the creation of a portfolio which addresses three major concerns within the study of art; Breadth, Quality and Concentration.
The creation of an AP Studio Art portfolio is an involved and personal process of discovery which is dependent on the student's unique thinking and problem-solving skills. Throughout this year long course students will finish a minimum of 24 works of art.
Pre-requisites for 2D Portfolio: Drawing, Painting, Advanced Art
Pre-requisites for 3D Portfolio: (Intro Art), Sculpture, Ceramics, Advanced Art

BAND

Fifth Grade Beginning Band
The Fifth Grade Beginning Band Course is an introduction to instrumental music during which the children learn fundamentals of music theory, as well as fundamentals of playing a woodwind, brass or percussion instrument. This is primarily an educational class, rather than a performing ensemble, however, the Fifth Grade Band does a short concert in conjunction with the Spring Grandparents Day Event. Concepts taught in this course include:

- Care and maintenance of the instrument
- Fundamentals of tone production (including embouchure or stick/mallet grip, breathing techniques, articulation)
- Melodic Notation (reading and playing the diatonic notes in a concert Bb Major scale)
- Rhythmic Notation (reading and playing in common meters, whole notes, half notes, quarter notes, eighth notes, and sixteenth notes)
- Method Book used is the Standard of Excellence Series by Bruce Pearson

Sixth Grade Intermediate Band
The Sixth Grade Intermediate Band is designed as an instructional class rather than as a performance ensemble. The focus of this course is upon instrumental fundamentals and playing skills and upon music theory fundamentals and even composition. Although performing is not the primary objective of this group, the students do have several performance opportunities both individually and as an ensemble. Concepts taught in this course include:

- Developing playing fundamentals (including articulation, intonation, phrasing, breath support)
- Melodic Notation (reading and playing concert F, Bb, Eb, and Ab Major scales and all chromatic notes in the required range for the District Honor Band audition)
- Rhythmic Notation (reading in more advanced meters and reading syncopated and dotted rhythms)
- Music theory (Major scale interval pattern and function of key signatures)
- Materials include the Standard of Excellence Series along with Grade I and Grade II Literature

Grades 7-12 Band
The advanced level of band includes Marching Band and Symphonic Band ensembles for students. Both of these bands perform throughout the school year at athletic and school assemblies.

- Playing Fundamentals (intonation, balance, appropriate articulation for various styles of literature)

- Melodic Notation (playing the Major scales and chromatic range required for GMEA All State audition)
- Rhythmic Notation (reading and playing complex syncopated rhythms)
- Music Theory (interval relationship between notes, Circle of Fifths and key Signature relationships)
- Marching Fundamentals (glide step, 8 to 5 size step, drill execution)
- Symphonic Literature (primarily Grade III and IV)

MUSIC & THEATER