



Middle School Curriculum Guide

Mission

To achieve academic excellence in an environment of respect, inclusion and diversity, utilizing expeditionary learning, global perspectives, and a multicultural art and science-enriched curriculum.

Middle School Philosophy

We believe that 12-14 year olds are at a pivotal stage in their academic and social development; they are neither “older elementary students” nor “younger high school students”. We value their growing ability to think more abstractly and conceptually about themselves and the world. Our Middle School program centers around an adolescent’s sense of wonderment and engages them in real life understanding that builds background knowledge and develops the skills needed for high school and life-long learning.

Expeditionary Learning

EL Education schools are exemplified by project-based learning expeditions, where students engage in interdisciplinary, in-depth study of compelling topics with assessment coming through cumulative products, public presentations and portfolios. We emphasize high levels of student engagement, achievement, and character development in real-life contexts. As an EL Education school, we strive to have students operate as mathematicians, scientists, historians, readers, writers,

and artists. Students learn to engage with their world as citizen scholars - applying their learning to engage with and change their world in positive ways.

Curriculum Philosophy

A curriculum describes what students should be learning throughout the grades. It gives clear statements of goals and objectives for courses. Our interdisciplinary curriculum is organized clearly and structured logically within and between subjects and from grade to grade. It gradually becomes more complex and difficult in terms of skills and objectives. We seek to stimulate intellectual curiosity and critical thinking in each of our students.

The Middle School curriculum at Santa Fe School for the Arts & Sciences is designed to support a cooperative learning environment that is sensitive to the individual strengths, interests, needs, and learning styles of students. The classroom is a community in which everyone works together to create a caring, safe environment where all of the students learn from one another, develop respect for each other, and foster an acceptance of individual differences. Our goal is to help each child develop a sense of responsibility toward each other, the environment, and their local and global community.

The Middle School curriculum is robust and intellectually inspiring. Using a departmental structure, the curriculum includes courses in Mathematics, History, English, Science, Spanish or Japanese, Life Skills, the Arts, Physical Education, and Community Service.

Mathematics

The Middle School Math Program strives to provide all students with a dynamic mathematics education that balances a solid foundation of basic skills with a constructed understanding of concepts that challenge, support, and instill excitement for math. The program emphasizes the exploration of ideas from numerical, algebraic, graphical, and computational perspectives.

Through a range of developmentally appropriate topics, students capitalize on the enormous growth that occurs during adolescence. By applying the belief that “every student is in the right place at the right time,” each student is guided to realize their full potential.

Our goal is for students to leave our Middle School as curious and flexible thinkers who are confident in their individual mathematical abilities and prepared to meet the challenges of higher mathematics.

Algebra I

All students in our middle school explore the fundamental concepts of beginning algebra that are seen in a high school Algebra I course. Algebraic concepts are viewed from varied perspectives to help students develop their abilities with abstraction and generalization; the application of knowledge is fundamental to each topic. This course includes real-world problems with relevant

uses of elementary algebra, statistics, probability, and geometry. The content of the course focuses on the concept of variables; the four basic arithmetic operations from an algebraic perspective; linear equations and inequalities; the geometry of lines in the plane; and the concepts of distance, square roots, and absolute value. The course also studies the algebraic descriptions of lines in the plane, using slope-intercept and linear combination forms of lines. Other topics include exponents, exponential growth and decay, operations with polynomials, linear systems and quadratics. The course draws on the *Illustrative Mathematics* curriculum and other texts.

Science

The Middle School Science curriculum has three principal components: students operate as citizen scientists and participate in a long-term, statewide study of watershed health by collecting data in the Santa Fe River Watershed; our science class integrates with the Middle School expedition; and students are given a survey of science topics that will prepare them for high school science classes. Students gain a broad base in many scientific fields, but emphasis during middle school is placed on crosscutting concepts rather than specific disciplinary knowledge (i.e., this is Science class, not a Physics or a Biology course). Students engage in the scientific process: they observe natural phenomena, formulate questions, develop research skills, and test their hypotheses through experiments and data collection. At the Santa Fe River, students become geochemists, hydrologists, benthic entomologists, lotic ecologists, and more, investigating water quality. The class's data is uploaded to a public database, where scientists, policymakers, and other students access it -- during the year, students have a chance to meet with some of these interested parties. In our classroom lab, we learn about chemistry, learn to use microscopes, and investigate the nature of science. Using a multiple-strategy approach, textbooks, vocabulary lists, and other standard references are utilized to support students' learning in labs and lectures. They achieve information and technology literacy by researching and preparing presentations about their scientific findings.

Humanities

Humanities is the examination of human culture. Our Middle School Humanities program includes the disciplines of English and History, allowing adolescents to connect literary and historical themes to self, other ideas, and world events. They form considered opinions when writing and analyzing persuasive and informative documents and texts. Careful reading is the standard, not the exception, and where student discussion is lively, well-informed, and enthusiastic. Through expeditions, or deep integrated units of study, and project-based learning, students tackle topics that have real-world relevance while doing the work of researchers, historians, readers, and writers.

History

In history, students acquire and organize information about places, people, and culture in the United States and in the world. A primary goal is to educate the student's whole being for a life of active, responsible citizenship. This course will enable the student to develop the knowledge and skills necessary for active participation in a democratic society. Students will be expected to question what being a "Citizen Scholar" truly means. They engage as active citizens and continue to grow

into that role. Adolescents gain knowledge and develop skills that will help with individual tenacity, group work dynamics, research, analytical thinking, interpretation of data, and communication through geography, historical primary and secondary sources, and field work. They see that history does not happen in a vacuum, and the cause and effect relationships of historical events, including the impact of the past on modern and current events.

English

Our English classes engage students in the careful reading, analysis, and writing of inspirational literature. Students study a variety of classic literature, along with contemporary writers and various forms of media, such as film, music, and podcasts. Our survey of literature provides students with an overview of writings from such authors as Jack London, Ray Bradbury, Shirley Jackson, Agatha Christie, Kurt Vonnegut, and many others. Analysis of novels, short stories, poetry, and non-fiction articles and biographies allow students to experience the breadth of literary forms. Students themselves compose short pieces, poems, essays, and research papers, each addressing specific skills. While exploratory and informal writing opportunities abound in class, students solidify their foundation for writing by learning how to create clearly written, logically organized, grammatically correct papers, with their own original voice, through the formula of a five-paragraph essay, then moving into expository and analytical essays. Students begin to deeply understand how literature is written by honing in on their own form of writing artistry. A specific focus on vocabulary expands critical grade level vocabulary and improves reading comprehension for students.

Languages, Life Skills, and Moving Images

Adolescence is a time to explore and extend learning. It is also a time of profound physical, cognitive, and emotional growth. We want students to have a broad and enriching school experience as they discover who they are and what their interests might be. In addition to the core academic subjects, the middle school program provides opportunities for enriched learning.

7th & 8th Grade Spanish

The Partnership for 21st Century Skills has identified Global Awareness, Communication and Collaboration, and Social and Cross-Cultural Skills as key traits for students and job seekers in the twenty-first century. In Spanish class, students develop these skills while learning grammar and conversational Spanish. In seventh and eighth grade, topics covered include: irregular verbs, adjective agreement, object pronouns, past tense verb conjugation, the imperative, and more. We use the textbook *En Español, Level 1* (Texts A & B) to support classroom instruction.

8th Grade Spanish culminates in an international Service Learning trip to Costa Rica, where students are immersed in the language and culture, and have opportunities to create meaningful and lasting connections with students at our sister school St. Paul's College in Alajuela.

7th & 8th Grade Japanese

The Japanese language course for 7th and 8th grade students will include learning how to communicate in Japanese in both writing and speaking, in addition to learning grammar. The Japanese language is a tool for communication and gaining an understanding of the people and their culture. By learning Japanese, students will learn how to communicate with Japanese people and those that speak the language.

The grammar in this class includes learning verb and adjective conjugations and situational expressions. Students will also learn both Hiragana and Katakana alphabets which are key to learning how to write in Japanese, in addition to learning introductory Kanji, the Chinese characters used in Japanese writing. We will learn through hands-on activities as we celebrate and learn about seasonal cultural events, food, and art as much as possible.

Life Skills

Our Middle School Life Skills program provides students with the information and skills necessary to take on the physical, emotional, and social changes that occur during the middle school years. Students develop strong advocacy skills and learn how to identify adult resources so they can take responsibility for their own learning inside and outside the classroom. This age and developmentally appropriate curriculum seeks to develop in students an understanding of how their choices impact themselves and others. Students learn about adolescent development and the types of challenges adolescents face during this time in their lives. They explore situations and decisions they may face in high school. There is a concentration on the skills required to negotiate these challenges, to obtain, interpret, and understand basic health information, products, and services, and make healthy decisions. Our program allows students to explore their own values and see how their personal choices allow them to live those values.

Physical Education

Middle school Physical Education promotes a culture based on the values of teamwork, effort, mutual support, and fitness. Individual and team sports are explicitly connected to fitness, wellness, and character development. Our program supports the physical, intellectual, and social-emotional development of students. In addition to learning games and sport techniques, an emphasis is placed on playing cooperatively and incorporating the school's character traits when playing more competitive games. A broad range of activities is part of the PE curriculum to broaden every student's appreciation of physical wellness and to give them a range of kinesthetic experiences.

Moving Images

Film is a powerful tool to convey one's message. Learning how to create effective storytelling through digital media, and acquiring the technical skills to do so, are the focuses of this course. Students take on all the roles connected with modern filmmaking by critiquing excerpts from films, "pitching" ideas, developing storyboards, casting, and filming and editing short films. All students in Moving Images courses learn how to use professional editing software and programs as part of

their technical development as filmmakers. Our students enter their films in various film festivals and student competitions as a means of creating pieces that will be seen by larger audiences. This course supports the 21st Century Learning Skills of using technology in meaningful ways and collaboration.

Arts Block

For their Arts Block, Middle School students choose to take classes in Fine Art, Theatre, Creative Writing, or Music.

Fine Arts

Fine Arts courses are an integral part of our Middle School curriculum. Students take a Fine Arts course for the entire academic year. The goals in every art class include both objective skills and innovative design and craftsmanship. Group and individual projects are designed to foster delight, serious observation, introspection, and growth in design and skill. Projects include: collages, printmaking, multimedia projects, painting, drawing, design, and sculpture. Art lessons teach value, contrast, whole-page composition, contour, perspective, and observation that are directly applied to ongoing projects. All students learn how to participate in constructive, compassionate critiques and are introduced to historical and contemporary art and artists.

Theatre

Students develop acting skills through a study of technique, improvisation, theater games, mime, camera work, and scene study. In addition, theater history is introduced in a general survey, exposing the students to the themes, styles, and development of dramatic arts. Participation in the performing arts will engage students in content and skills that provide meaningful and successful life experiences. Activities lead to performance opportunities where students build self-confidence and a sense of pride in their accomplishments.

Music

In our music class, students listen to and create music to explore their own musicality. The class allows multiple approaches to music making and appreciation. As a class, we become a musical ensemble utilizing the interests, knowledge, and skills of each member of the class to put together a unique combination of instruments and voices. Students are given the opportunity to explore music primarily through percussion. Using a variety of West African hand drums, as well as Zimbabwean marimbas, students learn traditional and contemporary compositions that are easy to perform, while picking up some of the basics of music theory along the way.

Wearable Art

Students explore how to create art to wear using different art media through the school year. After experimenting with paper mask making with paper clay and paint in the first phase, students can choose to experiment with different materials and techniques to expand their look. The categories of accessories include fashion accessories such as necklaces, bracelets, hats, hair accessories, rings

etc., halloween costumes, anime costumes, etc. The main media will include bead stringing, wire wrapping the beads, simple sewing, paper constructions, paper clay constructions, and more. Every month, the students will learn different materials and how to work with them. They will create a plan and learn to design their look at the beginning of the year. Drafts and revisions will help students to improve on their ideas as they go. By the end of the year, students will create a whole look designed by themselves based on their plans.

Middle School Electives

Middle School students enjoy choosing from Elective classes each semester to explore their own interests. Below are examples of Elective classes, both current and those offered in past years.

Fiber Arts

In Fiber Arts, students explore various fiber-based materials and participate in creative and fun projects during the three trimesters of this course. Students focus on multimedia projects, things like turning t-shirts into jumbo yarn for arm knitting, combining printmaking with sewing, beading, and embroidery. They will also explore felting, dying fibers, weaving, knitting, and crocheting. Students will also participate in trips to fiber arts-related locales in the Santa Fe area.

Games & Sports

In this elective students discover and explore the games of Spikeball, Ping-Pong (a.k.a. Table Tennis), and Pickleball. The great thing about all three of these games is that they're accessible to pretty much anyone regardless of prior skill or interest, and yet, when practiced and played often, they provide some of the most epically fun and competitive experiences you'll find in the world of games and sports. All you need is a positive, team-based competitive attitude and a willingness to sweat a little bit (yes, you'll sweat playing Ping-Pong).

Coding

We must all either "program or be programmed," and in the Coding elective, students learn how to be masters of their technology. Students will explore their coding and creative talents through a variety of programming languages and environments including Python, HTML, and Scratch. Students have the option of building a website, coding their own video game, or creating an animation as a final project for the class. Additionally, following the belief that the best way to learn something is to teach it, students will learn about the Hour of Code and help to spread knowledge of coding throughout our school.

Robotics

The Robotics elective is an exploration of creativity, programming, and engineering. Students practice building and programming robots to complete specific tasks. They will learn about the design process and about how engineers and inventors develop new technologies. Students explore how robots are used in the world and what the future holds for robotic technologies.

Washoku - the art and culture of Japanese food

This is not a normal cooking class. Students learn there is more than sushi and mochi in Japanese food! Students will learn the history and culture around Japanese food. A few times a trimester, there are cooking sessions. They will explore the history and preparation of Japanese traditional food items such as miso paste, udon noodles, and soup broth. Once miso paste is made and ready, they will cook dishes using the items. We will make a few trips to the Asian Market. In the cooking sessions, they will learn other popular items like sushi and Japanese sweets. Traditional table etiquette and language will be included in the class. The goal is to learn how Japanese people eat their food in a way that is pretty and healthy.

Fiber Arts

In Fiber Arts, students explore various fiber-based materials and participate in creative and fun projects during the three trimesters of this course. Students engage in multi-media projects like turning t-shirts into jumbo yarn for arm knitting, combining print making with sewing, beading and embroidery. The class also explores felting, dying fibers, weaving, knitting, and crocheting based on student interest. Second-year students (8th graders who participated in fiber arts in their seventh grade year) have the option of designing their own fiber project in the spring. Students also participate in trips to fiber arts related locales in the Santa Fe area.

Community Service/Service Learning

“We are crew, not passengers.” As an expeditionary learning school, students and teachers are strengthened by acts of consequential service to others, and one of our school’s primary functions is to prepare students with the attitudes and skills to learn from and be of service. In our middle school, we intentionally create opportunities for students to serve our school and the larger community. Currently, students work with Kingston’s memory care unit, are big buddies to younger students on campus, and perform preservation and restoration work at the Santa Fe River.

Our service learning extends beyond charitable acts and also encompasses academic products that serve our community, such as an energy audit of our school to help us reduce our carbon footprint, working in our school’s greenhouse to create nutritious food for our students and community, and building and maintaining bookshelves around Santa Fe to ensure all children have access to high quality books.

Ultimately, our teachers connect this service learning to the ethic of kindness and service that is simply a part of school culture.

Leadership & Mentorship

During our 8th grade leadership class, we prepare for life beyond Middle School. Students begin the process of preparing for high school by learning to advocate for themselves as learners, figure out what it means to be a citizen scholar and start the process of choosing a school and going through an application process. In this class, 8th graders develop and hone specific skills such as completing high school applications, writing a resume, and interview etiquette. Emphasis is placed on

understanding and transferring these successful skills to high school and beyond. Students applying to high schools without an application process can benefit from their peers' experiences.

Later in the year, we introduce our mentorship program, which allows adolescents to explore future professional passions and curiosities. 8th-grade students will have the opportunity to partner with a mentor during the final trimester, giving them a chance to experience what a professional in the field actually does at their jobs, the types of training required, as well as the mindsets needed in that particular occupation. The mentorships last a few months, but students in the past have continued their mentorships well beyond this allotted time. Their learning culminates in a Mentorship Festival, in which the students share their new knowledge and introduce their mentors to our larger community.

Assessment & Evaluation

Assessment yields information that allows teachers to create a curriculum that is challenging, age appropriate, and responds to the particular students in each class. It is a vehicle for students to demonstrate understanding of skills, concepts, and ideas. Learning is not static, and assessment at Arts & Sciences is on-going. Multiple means of developmentally appropriate assessments are used, such as formal and informal observations, dialogue with students, documentation of particular skills and concepts, projects, written work, tests, and quizzes.

As each grade moves students towards more autonomy and independence, students are encouraged and taught to lead their own learning and demonstrate knowledge to a variety of audiences. Student-led portfolio presentations, end-of-trimester presentations, Expedition Museums, Science Symposiums, and publishing work in journals and newspapers are hallmarks of the middle school experience.

Student-centered assessment also yields data that is used to evaluate student growth, grade level skills, and concepts. This data is presented to families at parent/teacher conferences and in written reports.

Portfolios

Portfolios are a central academic tradition at Arts & Sciences from age three all the way through to the 8th grade. We strongly believe that students demonstrate their knowledge in authentic, developmentally appropriate ways. Portfolios involve students in the power of reflection, the critically challenging act of thinking about their learning, and constructing and communicating a sense of the learning experience as a coherent, unified, developmental process. Students discover, understand, and communicate what, how, when, and why they learn.

Each portfolio includes student reflections on their learning, documentation of skills and concepts through products and projects, and culminates in a student-led portfolio presentation at the end of the academic year. Student portfolios include authentic work, and multiple drafts leading to

well-executed products that are part of a *process*. Portfolios are an "organized documentation of growth and achievement that provides tangible evidence of the attainment of professional knowledge, skills, and dispositions. Each portfolio is goal-driven, original, and reflective." (Campbell, Melenzyer, Nettles, and Wyman 2000)

The student-led portfolio conference gives students the opportunity to reflect on and share their learning with an audience of their parents/guardians and teachers, which for the upper elementary grades and the middle school is much like a thesis or professional presentation. Student-led portfolio conferences are authentic opportunities for students to use presentation, communication, and critical thinking skills. Students gain a sense of pride and accomplishment through this experience, and through this process students develop a deeper understanding of an expeditionary learning design principle—responsibility for learning.

Student Presentations

Student presentations, such as our Wintercomes tradition, Museums, TED talks and Symposiums, give students the opportunity to share their learning with an audience outside their parents and teachers. Students gain confidence and courage as well as a sense of accomplishment as they prepare for and present high-quality work to a larger audience. Quality work, rooted in personal pride and craftsmanship, are hallmarks of Deeper Learning, in which students are the stewards of their work and understanding. Learning is not confined to academics; multiple disciplines and modalities are honored and required: movement/kinesthetic learning and the arts are integrated into learning principles.

Student presentations are opportunities for students to learn to develop oral language and presentation skills, in addition to academic knowledge. Culminating projects at presentations allows students to practice and acquire 21st Century skills such as working with groups, meeting deadlines, and social learning.

Parent/Teacher Conferences

Parents and caregivers are crucial partners with our school in each child's growth and success. Parent/Teacher Conferences are avenues for communication and collaboration between home and school. Teachers use these meetings to develop rapport with families, gain knowledge about each student, as well as share information and collaboratively set goals for students. These are also opportunities to talk about student challenges and set up support to ensure that students have a plan for success.

We require parents/caregivers to attend formally scheduled conferences in the fall and have opportunities for conferences later in the year. Parents are encouraged to communicate with teachers about their students, and teachers and parents may schedule conferences throughout the year on an as-needed basis.

Student-led Conferences

Middle school students also lead conferences between their families and their teachers. Students use our school's character traits, the habits of a scholar, and their academic work as a way to talk about their successes and failures and demonstrate their growth throughout the year.

At the end of the year, all students will lead their portfolio conferences (see above) with teachers and family to talk about their culminating work and progress throughout the year as they prepare to enter 8th or 9th grade.

Written Reports/Report Cards

Evaluative, formal reports are written by teachers and given to parents/guardians at regular intervals throughout the year. Middle School students receive formal grades in all their classes. Middle School report cards are given to families each academic trimester. Grades are reported each trimester as well as an evaluation of how a student reflects, upholds, and exemplifies our habits of scholarship: Collaboration, Critical Thinking, Perseverance, and Responsibility.