



Curriculum Guide  
Academy of St. Joseph

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## Mission Statement

The Academy of St. Joseph empowers and challenges Pre Kindergarten through Eighth-Grade students with a curriculum based on the arts, sciences, and the humanities integrated with the values of the Catholic Church.

The Academy fosters the intellectual, spiritual, social, emotional and physical development of students, while instilling in them the highest standards of character, competence, and compassion in a joyful, welcoming community.

The Academy creates a strong foundation for students to become life-long learners, responsible citizens and effective leaders as they embrace and improve the global society.

The school admits students of any race, religion, color or national or ethnic origin to all rights, privileges, programs and activities generally accorded or made available to students at the school. It does not discriminate on the basis of race, color, national or ethnic origin or sexual orientation in the administration of its educational policies, admissions policies, scholarship policies, and athletic or other school administered programs.

## Program Overview

The Academy of St. Joseph challenges students through a rigorous and enriched curriculum. Students are asked to become critical thinkers, collaborative problem-solvers, and globally minded leaders through a deep understanding of mathematics, science, and the humanities. In addition to the core academic program, daily instruction is offered in Spanish to all students giving them early exposure to another language. By the end of eighth grade students have mastered beginning conversational, writing, and reading, skills in Spanish. All students receive instruction in Art, Music, and Physical Education. Students in Lower School receive weekly instruction in Library Science and Chess. Upper School students have the opportunity to participate in an elective block, which allows them to explore their interests through a variety of course offerings. The learning environment created by this enriched and integrated curriculum fosters opportunities for students to ask questions, explore their own thinking process, take risks and make informed decisions. Students are involved in class projects that support their development as confident, competent, and collaborative learners. Opportunities for hands on exploration and real life application allow students to extend and apply their knowledge beyond the classroom. All learning experiences support students as they develop skills that are foundational for lifelong learning, well-being and social development. The focus of all learning experiences at the Academy of St. Joseph are to challenge and engage with the purpose of building confidence, a love for learning, a thirst for knowledge and wisdom, and above all a strong foundation for the future intellectual, physical and social development of our students.

### Language Arts

The language arts program focuses on enhancing competence and confidence in speaking, listening, reading and writing. The children are exposed to a wide range of literary genres. Books are shared cross- curriculum so that children make the connection between the spoken and written word. Children are exposed to rich vocabulary and are provided an abundance of opportunities to experiment with reading and writing in order to become confident, independent readers and writers. Students explore writing through many genres, such as poetry, persuasive essays, narratives, expository writing, creative writing and journaling. The students focus on the formal writing and drafting process to ensure their best work. The craft of writing is explored through mini lessons that help students hone these skills so they are applied with confidence. The reading curriculum encompasses lessons in spelling, handwriting, vocabulary, and grammar. Reading is taught through the study of phonics and sight word instruction, as well as read alouds, choral reading, small group reading, and buddy reading. Each student has opportunities to practice public speaking, both in class and in front of the school when leading morning assembly.

### Mathematics

The goal of the math program is to provide students with the knowledge and skills necessary to apply to every day math problems in the real world. Students will develop a broad range of strategies so to empower them to become confident problem solvers. Students will have many hands-on opportunities to develop their number sense, abstract thinking, conceptual understanding, procedural fluency, and problem-solving skills. The content and process strands (the how they will learn and use what they are learning) are taught in an integrated

fashion so that students can see how mathematical knowledge is related to the real world. The mathematics program focuses on process and logical thinking. Number relationships and problem solving are emphasized through formal instruction on the four major operations in arithmetic, as well as measurement, geometry, fractions, graphing and estimation. The program is enriched by student investigations and exploratory activities. In Pre-Kindergarten through sixth grade, Singapore Math is the main curriculum offered to students, supplemented with additional materials as teachers see fit. Seventh grade is offered Pre-Algebra and eighth grade is offered Algebra I.

### **Science**

The Science curriculum implemented at the Academy of St. Joseph is interactive and rooted in exploration, allowing students to relate and connect with Science through real life experience. It is organized around a series of questions exploring: science, engineering and technology, life science, earth science, and physical science. Students are involved in extensive lab work in order to make discoveries and make science relevant to their lives. Upper School students are introduced to the school Science Lab in fifth grade and follow a course of study of general lab science, earth science, biology, chemistry and physics.

### **Social Studies**

According to the National Council for Social Studies, “the primary purpose of social studies is to help young people develop the ability to make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an independent world.” The social studies curriculum will link the lives of the students to the world. Students will come to understand how the past affects the world now and how it is they can help to create the future. Lower School students start from themselves and circle outwards to their homes, communities, city, state and country to understand the interconnectedness of the world around them. Students in the Upper School explore the history of the western and eastern hemisphere and a two-year course on American History.

### **Religion**

The religion curriculum is designed to infuse, integrate and inspire Catholic values into daily living. The substance of religious instruction will be that of doctrine, community and service. The religion curriculum focuses on the teachings of Jesus, the examples of saints, the sacraments, and history of the Church. Students will attend Mass once a month. All tenets and traditions of other faiths will be respected.

### **Technology**

The Academy integrates the use of Technology through both formal instruction and organically throughout the day. Students in Lower School and Upper School receive direct Technology instruction, learning how to code, format, and use the various components of Microsoft Office among other skills. Students are encouraged to employ what they learn through the integration of technology in all subjects. Students in Early Childhood and Lower School have dedicated iPads. Students in Upper School have dedicated MacBook Pros. All classrooms at the Academy are equipped with SmartBoards.

## Lower School

Early learning has a profound, lifelong effect on social, emotional, moral and academic development, as well as self-esteem. At the Academy of St. Joseph, we give young children the strongest foundation possible, with a program built upon the following philosophies and educational principles:

- Individual children develop at different paces and in different ways
- Children thrive in learning environments that are engaging, caring, developmentally appropriate, integrated, and challenging
  - An effective curriculum is interdisciplinary with an emphasis on hands-on learning, providing continual opportunities for children to question, research and analyze. This supports a healthy balance among the social, emotional, intellectual and physical development of the individual child
- The learning environment must provide opportunities for children to explore, to play, to investigate, and to communicate their ideas and findings
- Observation and documentation of how each child plans, executes, and completes a task is core to the assessment and future curriculum planning for each child
- Social emotional intelligence is essential for future life success, thus children have fun developing character, competence and compassion, as well as learning the ins-and-outs of good manners, social grace, etiquette and respect of self and others

### Pre Kindergarten Three

Pre Kindergarten Three is a time to build self-esteem, learn how to interact with a school environment and build positive social relationships within the school community. Students have the opportunity to use their natural curiosity to explore their learning environment and make new friendships.

#### Language Development

Students in Pre Kindergarten Three will have the chance to build their speaking skills by daily participation in class songs and discussions, interacting with teachers and classmates, and organic opportunities for engaging their speaking skills throughout the day. Students will develop their print literacy through an exploration of a wide variety of stories and books, discovery of letters and objects, and learning how to recognize and begin to form their own name. A print rich environment will give students the opportunity to naturally develop connections to the letters of the alphabet, as well as through weekly letter studies.

#### Mathematics Development

Students will have the opportunity to explore math through hands on manipulation of real life objects. Using real life objects to sort and classify, count to ten, put things in order, and learn about shapes, students will not just learn math but understand every day applications of mathematical concepts.

#### Social Development

Pre Kindergarten Three is the perfect time to learn how school "works." For this reason, much of the day is focused on learning to be a good member of the classroom and how to

transition. At this age students need to do things like practice how to say good-bye to their family, play and work with friends, share and take turns, use their best manners, clean up, and follow directions and routines.

### **Creative Development**

Threes love to explore the world around them. Inspiring the creative mind is important at this age. Students participate in daily art and music activities with their teacher. Dedicated music and art classes are taught once a week.

### **Physical Development**

Gross and fine motor skill development is an integral part of the three-year-old program. Cutting, gluing, drawing, and learning to properly grip a writing utensil are all part of fine motor development. Gross motor development is achieved through twice weekly physical education class and opportunities to play on the rooftop playground, among various classroom activities focused on music and movement.

### **Religion**

Students are introduced to the sign of cross, the idea of showing reverence by turning our voices off during prayer, and learning some simple prayers and songs.

## **Pre Kindergarten Four**

Pre Kindergarten Four is a time for daily exploration and adventure as students continue to learn what it means to be a good school citizen, classmate, and friend.

### **Language Arts**

The focus of the language arts curriculum at this level is to engage students in opportunities that will develop listening, speaking, pre-reading and pre-writing skills. The goal is to develop life long readers and writers. Students learn to communicate their thoughts and ideas, ask questions, understand and follow directions, and learn about the structure and components of a book. Students also begin to learn strategies for the foundations of reading.

### **Mathematics**

The mathematics curriculum provides students with opportunities to develop early number sense through exploring, investigating and problem solving. The curriculum emphasis is on manipulation of concrete materials, measurement, numerical recognition, number concepts, and an introduction to time and money. Students learn to recognize numerals, count forwards and backwards, sort and organize, work with patterning and measuring, understand basics of time, and practice the process of solving mathematical problems through critical thinking. Students are also introduced to early concepts found in Singapore Math, like the ten frame.

### **Science**

The science curriculum provides students with opportunities for exploration, manipulation and observation using all five senses. Students learn about the world around them by exploring the four seasons, comparing and contrasting objects in their environment, analyzing and predicting weather patterns, collect and describing data, understanding the difference between living and non living things, and exploring the diverse habitats on Earth.

## **Social Studies**

The social studies curriculum focuses on the relationship of self within the family and the community. Cultural differences, traditions, and current events will be explored. Mapping skills will be introduced. Students learn how to participate in their classroom community and home community, become familiar with the components of a neighborhood, explore maps and globes, understand the concepts of past, present and future through the use of a daily schedule, recognize important symbols of school life.

## **Religion**

The religion curriculum focuses on coming to know that God loves us as a loving parent. The students will be introduced to the religious signs, symbols, and traditions of the Catholic faith.

## **Kindergarten**

Kindergarten is a pivotal year. School life is in full swing at the age of five. Being an active citizen in the school community, learning to read and write more extensively, developing a strong number sense, and taking on leadership roles at school are all part of this important and active year. Opportunities for self-discovery and growth are abound at this exciting time. Structure and consistency is important for developing good school habits.

## **Literacy**

Kindergarten is the foundational year for reading and writing. Students focus on strategies for decoding, fluency and comprehension through a balanced literacy model. Writing is approached from the Writer's Workshop model, where students explore different writing topics through guided writing, shared writing, journal writing, and independent writing. Reading is approached through the same workshop model. Students begin by learning about how the workshop model works, and then delve into the different genres readers and writers can explore as they expose themselves to a variety of mentor texts and experiment with writing a variety of genres.

## **Mathematics**

Students are introduced to early Singapore Math strategies and ways of thinking through the exploration of place value and early number modeling through number bonds and ten frames. Students work with manipulatives and pictures, eventually moving to the more abstract to develop their number sense. They begin to build number sentences for simple addition and subtraction problems with numbers up to ten. They will also explore concepts of graphing, money, measurement, and geometry through the Singapore Math primer, Ready for Maths.

## **Science**

Students explore science through an interactive approach. They begin by defining what science is and the methods scientists use by learning about the scientific method. Students delve into a study of living things by exploring their needs. Students will also learn about what makes up the Earth and study weather patterns among other themes.

## **Social Studies**

The theme of social studies in Kindergarten is *The World Around Us*. Students explore what makes up a community and what it means to be a good citizen. Students look in depth at jobs, maps, and neighborhoods through a modern lens, and then celebrate history by looking at how the world has changed from the past to the present day.

## **Religion**

Students deepen their understanding of the meaning of reverence and the symbols of the Church, while building their working knowledge of important prayers, biblical events, and important events during the liturgical calendar.

## **First Grade**

First grade is a year of change. Building from the foundation that was set in Kindergarten, students in first grade engage in learning from a place of eagerness and excitement. Scholarly habits and the seeds of academic and personal independence take root in first grade.

## **Literacy**

With early reading and writing skills in place, literacy begins to develop in many new ways. Continuing from a balanced literacy and reading/writing workshop model students will explore an array of themes that ask them to look closely at the features of fiction and nonfiction writing, both as a reader and writer. Students also begin to explore writing poetry and song.

## **Mathematics**

Singapore Math supports the growing development of number sense through the understanding of numbers as parts and wholes. Place value, ten frames, and number bonds are central focuses of the first grade year, helping students deepen their understanding of how numbers can be decomposed into parts. Students focus on mastering math facts and mental math strategies with numbers up to 20. Model drawing is introduced in first grade as a strategy for problem solving. Students also explore graphing, money, measurement and geometry. A brief introduction to early concepts in division and multiplication culminate the end of first grade mathematics.

## **Science**

Having learned the basics of the scientific method, students begin to engage more deeply in thinking like a scientist by learning how to approach concepts from a design process. Students will also delve more deeply into a study of living things by exploring life on land versus water. Students will also engage in a study of extinct plants and animals. Students will continue their exploration of weather by taking an in depth look at the water cycle.

## **Social Studies**

The theme of first grade social studies is *Families Living and Working Together*. During First Grade students continue to explore the concept of community by taking a deeper look at rules and laws, neighborhood helpers, weather, maps and globes, and goods and services. Students will relate what they are learning by applying these ideas to the community where they live. In first grade students also explore markers of the American people through an a study of U.S. Symbols and holidays.



## **Religion**

First grade students will explore a simplified version of the mysteries of the Catholic faith. They will learn about the goodness of God and Jesus, and the importance of responding to this goodness. Students will explore the role of Jesus as the Savior during First Grade, and his role as the Good Shepherd.

## **Second Grade**

Second grade is a year to extend and refine the many critical skills learned in first grade. Second graders become more independent with each day. We begin the transition from learning to read, to reading to learn by the end of the year.

### **Literacy**

Second grade students are refining their reading and writing skills as they begin the exciting process of transition from learning to read and write, to using reading and writing as a means of learning. Throughout second grade students continue to strengthen the strategies they've learned, and add new strategies that will support this transition.

Students look in depth at characters and their stories and become experts at nonfiction. Students also focus on extending themselves as readers and writers, as they read longer books, and write longer compositions. In second grade, students also begin to explore strategies for writing for specific subjects.

### **Mathematics**

Singapore Math builds on number sense by extending the study of place value and model drawing, moving from the number bond to the bar model. From the part-whole framework that was established in earlier years, fractions are introduced. Students revisit addition and subtraction with larger numbers and with an added focus on regrouping. Basic multiplication and division are also a main focus of the second grade year. Measurement, geometry, money, and graphing are all revisited and extended.

### **Science**

As the spiral of study continues, second grade students continue to employ the scientific method and design process as they dive deeper into scientific concepts. Students grow their knowledge of life science with a study of life cycles. Students also engage in an detailed habitat study where they explore the types of rocks and minerals that compose different habitats. The study of weather also continues, with a look at how weather is measured and tracked by scientists, and how severe weather occurs.

### **Social Studies**

The theme of second grade social studies is *Neighborhoods and Community*. Students have explored what a community is and what it looks like on a smaller scale by studying their neighborhood and now begin to study larger communities through a look at North America. Students will learn about leaders and government, identifying location, resources, and culture. Students will relate their studies to themselves through a family history study. The history of America continues with a look at America's beginnings and heroes.

## **Religion**

The focus of the second grade program, *God Cares for Us*, is to prepare the students for the sacraments of Reconciliation and the Eucharist. During this year students will also partake in the Second Grade Saints project.

## **Third Grade**

By third grade, students are reading and writing as a mode of learning, participating in school life with a newfound independence, and mastering many other skills. Third grade is a time of great energy and excitement.

### **Literacy**

Now that students are confident with the reading and writing strategies in their toolbox, they are able to explore a wide variety of genres both as readers and writers. From mystery to persuasive speeches to a fairytale, third graders are busy exploring what makes good writing from the perspective of a reader and writer. Focusing on specific strategies for learning from reading and writing takes center stage.

### **Mathematics**

Students are introduced to visualizing and repeated addition and subtractions as additional strategies for problem-solving. Students begin making arrays and groups to further understand the concepts of multiplication and division. In third grade, students are expected to master their basic multiplication and division facts up to 12. Model Drawing is a continued focus in Singapore Math; with the bar model a strategy for solving word problems using large numbers, and problem-solving with all four operations. Students continue to revisit and build their knowledge in the areas of fractions, money, graphing, measurement, geometry and mental math.

### **Science**

Throughout the early years of lower school students have explored the scientific method and design process and now employ these methods with a particular focus on technology. Other topics explored include further expansion of life science through classification of living things and exploration of ecosystems. Physical science is explored through a study of the states of matter, forms of energy, and force. A study of space through a look at Earth and our universe is also conducted.

### **Social Studies**

The theme of social studies in third grade is *Communities Near and Far*. By this point in their studies, students have explored the concept of community from their neighborhood to their continent. In third grade, they will explore what communities around the world look like.

## **Religion**

In the third grade program, *We Believe*, students explore the main truths Catholics believe and express in the Apostles' Creed. Students will also explore the goodness of God and His call to faith.

## **Fourth Grade**

Fourth grade is a year for mastery of all skills learned in Lower School. Independence is paramount as the transition begins from Lower School student to Upper School student.

### **Literacy**

Students continue their exploration of genre and the key traits of good readers and writers in fourth grade. Students work to interpret characters as they read, and spend time developing characters as they develop narrative writing pieces. Students explore nonfiction writing from around the world, and develop their nonfiction writing skills as they write about topics of personal expertise. Students explore strategies for reading about history through a study of the American Revolution, while also writing about it.

### **Mathematics**

With a mastery of addition, subtraction, multiplication and division, students in fourth grade, approach numbers methodically through the distributive property, partial product multiplication method and partial quotient division method. Students continue to model draw for all operations, and now include model drawing in their work with measurement and fractions. Students extend their study beyond whole numbers, beginning to work with decimals. Students also work with estimation, number theory, geometry and graphs.

### **Science**

Continuing with the scientific method and design process, students in fourth grade continue to spiral outward as they expand their knowledge of life science through a study of the structures that help plants and animals survive. Earth science in fourth grade focuses on the resources of the planet, and mineral and rock classification. The study of Earth and space continues with a look at how the Earth moves, star patterns, and the phases of the moon. In physical science students explore electricity and magnetism, as well as motion and speed.

### **Social Studies**

The theme of fourth grade social studies is *The United States*, with a particular focus on New York State history. Students begin by studying the regions of North America and the indigenous peoples. Students then study the changing landscape of North America as the colonies are formed, and studying the regions of North America and the indigenous peoples. Students then study the changing landscape of North America, as the colonies are formed, and take an in depth look at the American Revolution, particularly as it relates to New York.

### **Religion**

In the fourth grade program, *God Guides Us*, students explore the Ten Commandments and Beatitudes as guides for living.

# Upper School

Upper School is a special place where students refine those things they have learned in Lower School and prepare themselves for the transition to high school. Upper School students have needs that are unique to this important time in their life and the Academy strives to address all of their needs both academic, social-emotional, and otherwise so that when the time for high school comes they are equipped to persevere and excel. The Upper School is guided by the following philosophies and educational principles:

- Students develop at different paces and in different ways. They must learn to advocate for themselves when help is needed and to challenge themselves to go beyond what is expected.
- Students thrive in learning environments that are engaging, caring, cross-curricular and challenging. As others invest in you, so must you invest in yourself. Ownership and responsibility for classwork, schoolwork, and daily choices guide daily life.
  - An effective curriculum is interdisciplinary with an emphasis on experiential learning, providing continual opportunities for critical thinking, research, investigation, analysis and discussion. A balance must be struck to support the social, emotional, intellectual and physical development of all students
  - Social-emotional intelligence is essential for future life success, thus students will be supported, as they grow further in character, competence and compassion. Good manners, social grace, etiquette and respect of self and all others are daily practices. Service to others and self-care are part of this equation.

## Fifth Grade

### English Language Arts

The Fifth Grade curriculum introduces students to sophisticated literary analysis and expands their understanding of the structure and vocabulary of the English language. Many of the novels read this year are coming of age tales, exploring the complexities facing young adults from a variety of perspectives. When reading the historical fiction novels, *Fever, 1793* and *The Watsons Go to Birmingham*, students complete companion projects exploring the setting and character development in each. This theme is also approached through the genre of fantasy when reading *The Lion, the Witch, and the Wardrobe* and *The Dreamer*. Going beyond basic comprehension, class discussions reach toward a deeper understanding of the characters and plot, as well as the author's intent and writing techniques. Students are asked to write about the literature they are reading, developing essay skills, and persuasive and expository writing skills, in addition to creative and technical writing mechanics.

Throughout the Fifth Grade, students develop their pre-writing, drafting, editing, and rewriting skills and increase their proficiency in the various types of writing: academic (expository, analytical, and argumentative), expressive (informal, personal), and creative (poems, short stories). The writing process is an essential part of Fifth Grade, with particular focus on revising and editing their work. Students continue to learn new vocabulary words, both through vocabulary introduced in the literature they read and in utilizing the Wordly Wise series. They will also practice grammar skills for their grade level. Students can expect bi-weekly vocabulary and grammar quizzes. Students also focus on typing projects using the basic guidelines for formatting.

## **Mathematics**

In fifth grade students explore larger whole numbers with a review of multiplication and division. Students also learn how to add, subtract, multiply and divide fractions and decimals with new strategies for more complex problems. Graphing and probability with a focus on mean, median, and mode, challenge students to explore theoretical and experimental probability. A main focus of the fifth grade year is geometry, during which students learn about angles, properties of triangles and four-sided shapes, surface area and volume, the area of a triangle, and three-dimensional shapes. Students conclude with a study of ratios and percent.

Text: Math in Focus Grade 5 Book A and B: Singapore Math by Marshall Cavendish.

## **Science: General Science**

In fifth grade, class time is structured to help students develop skills necessary for Upper School Science. Students are introduced to lab equipment and safety precautions to follow during laboratory investigations. Students also learn how to present laboratory observations and results. In Physical Science, students study the metric system, forces, motion, speed and velocity, acceleration and momentum. This content is followed by the study of simple machines. Students then study changes of matter in both physical and chemical changes. Atoms and molecules are introduced as the building blocks of both living and nonliving things. Students in Life Science learn to use compound microscopes as biological tools and study units on microscopy, ecosystems, and adaptations. They use guided lab activities and observations to support the learning of scientific concepts and synthesize their knowledge by completing a research project on biomes where they design an animal and its habitat.

## **History: Geography and Cultures of the World**

Fifth grade history explores different countries around the world, with a specific focus on culture and geography. For each country, students will study the geography and history of the country then moving to an in-depth study of the country's culture and its modern position in the world. Students will explore the following topics: • World Geography • Development of Civilizations • Country studies including: Mexico, Canada, Japan, South Africa, and India • Independent Research Project on country of choice

## **Religion**

The fifth grade religion program, *We Worship*, focuses on the sacraments, particularly the Eucharist.

## **Sixth Grade**

### **English Language Arts**

The sixth grade English Language Arts program strengthens students' skills as both young readers and writers by pushing them to delve deep into a wide variety of literature. Through close reading and discussion, students explore contemporary and classic literature, including poetry, science fiction, historical fiction and nonfiction. Themes of the works explored in sixth grade include courage and perseverance, encouraging students to draw connections to their own lives, but to also consider the world from a viewpoint other than their own.

In *A Long Walk to Water*, the true story of a young teenage boy in war-torn Sudan, students will learn about his struggle, but will also be challenged to develop civic-minded projects in response. While reading *Bud, Not Buddy*, students probe the life experiences of ten-year old

orphan Bud who is living through the Great Depression. Other texts include *The Evolution of Calpurnia Tate*, and a wide variety of short stories and poetry.

Throughout this year, sixth grade students become mindful readers through guided questions and response activities. In compositions and projects, students incorporate various methods of literary analysis to interpret stories, poems and excerpts from a text. Sixth graders write paragraphs that focus on an understanding of mood, character, recurring themes and important passages. The evolution of the writing process continues, with a focus on using text evidence to support thinking, as they move from the literal to the analytical and abstract.

Students continue with their vocabulary studies utilizing the Wordly Wise series and vocabulary found in the literature they read, focusing on using context clues to understand the meanings of academic vocabulary. Students also continue with grammar instruction. Bi-weekly grammar and vocabulary quizzes can be expected. At this grade level, students are also introduced to the more detailed elements of formatting and style of writing.

### **Mathematics**

In sixth grade, students extend upon much of what they learned in fifth grade through a continued study of multiplying and dividing fractions, positive and negative numbers, ratio, rates and percent. Students continue to explore their study of geometry through learning about area of polygons, circumference and area of a circle, and a continued study of surface area and volume of solids. Students are introduced to new algebraic expressions, equalities and inequalities, and the coordinate plane in the sixth grade year. Additionally, students will be introduced to statistics and culminate with measures of central tendency.

Text: Math in Focus Grade 6 Book A and B: Singapore Math by Marshall Cavendish

### **Science: Earth Science**

In Earth Science, students learn about natural resources, meteorology and oceanography. In natural resources, students are introduced to the overarching concepts of soil, water and air. The sub-topics within these areas are renewable and non-renewable resources, recycling and re-using, soil formation, soil erosion, soil profile, soil color and soil protection, properties of water, the water cycle, desalination, water waste, layers of the atmosphere, indoor and outdoor pollution, acid rain, greenhouse effect, global warming, and the long and short-term effects of pollution on health. In meteorology, the material covered is the earth's atmosphere, including atmospheric optics, air pressure, air mass, precipitation, global and local wind, cloud and fog formation, thunderstorms, and fronts. The unit on oceanography covers ocean currents, ocean life and ocean floor. Students also complete a research project on weather where they predict the weather of five cities for the day.

### **History: Ancient Civilizations**

Sixth grade history focuses on the ancient civilizations of Mesopotamia, Egypt, China, Greece, Rome, and Byzantium. Students study the development of each civilization and the similarities and differences of those societies as well as how they have informed the development of modern cultures. . Students will explore the following for each civilization:

- Geography
- Government
- Religion
- Technology
- Art and Culture

## Religion

The sixth grade religion program, *God Calls a People*, is focused on the Sacred Scripture, in particular, the Old Testament.

## Seventh Grade

### English Language Arts

English Language Arts in the seventh grade is filled with a variety of exciting literature, discussion, and projects. Students explore literature that correlates with their history curriculum and connects to their development as critical thinkers about the past, present, and future and supports them in their development towards being a world-minded person. Reading and discussion happens on both the literal and abstract level, pushing students to think deeply about what they are reading. Both *Chains* and *Across Five Aprils* correlate to their studies in American history, exploring both the Revolutionary and Civil Wars, from the perspectives of two very different protagonists. While reading *The Giver* and *Animal Farm*, students compare and contrast the role of government in the lives of its citizens and formulate deeper questions about government in our world today. Themes explored in the novels read this year include discrimination, personal conviction, loss of innocence, and the impact of society on the individual. Seventh Grade students also read a collection of short stories that explore the use of suspense and foreshadowing in crafting a story. Poetry becomes a major focus in the seventh grade, as the students read and analyze the complex poetry of Walt Whitman, Emily Dickinson, and other nineteenth century American poets.

From the beginning of the year, students are expected to write longer and more complex pieces of work, through careful use of the writing process. Students are challenged to write formal analytical essays in response to literature, as well as compare and contrast writing styles and methods of mentor texts to develop strategies for their own use. Throughout this year students learn the art of conveying thoughts in a clear and concise manner through writing and public speaking.

Students continue with their vocabulary studies, focusing on using context clues to understand the meanings of vocabulary words in the texts that they read. Students will also continue the Worldly Wise series, as it is important way to become exposed to a variety of academic vocabulary outside of the literature that they read, and practice answering questions that might appear on standardized tests. Students also continue receiving formal grammar instruction. Students can expect bi-weekly vocabulary and grammar quizzes.

### Mathematics: Pre-Algebra/Algebra

In seventh grade students begin a course of study in Pre-Algebra and Algebra. Students will explore the following concepts:

- Variables, Expressions, and Integers
- Solving Equations
- Multi-Step Equations and Inequalities
- Factors, Fractions, and Exponents
- Rational Numbers and Equations
- Ratio, Proportion, and Probability
- Percent
- Linear Functions
- Real Numbers and Right Triangles
- Measurement, Area, and Volume
- Data Analysis and Probability
- Polynomials and Nonlinear Functions
- Angle Relationships and Transformations

Text: Algebra I course for iPad HMH Fuse: Algebra I based on Algebra I Holt McDougal text



### **Science: Introductory Biology**

The Introductory Biology unit includes the following topics:

1) study of cells; 2) microscopy; 3) cell membrane; 4) DNA and protein synthesis; 5) cell reproduction; 6) introduction to genetics; 7) bacteria and bacterial control; 8) dental hygiene; 9) plant structure and classification, and, 10) HIV/AIDS. The subtopics within cell, cell membrane and microscopy include cell structure and classification, cellular organelles and functions, cell membrane structure, cell membrane functions, diffusion, osmosis, tonicity, facilitated diffusion, active transport, simple and compound microscope, parts of the microscope, magnification and the handling of the microscope. In the section on DNA and protein synthesis, students learn the structure of DNA, nucleotides, human DNA, DNA replication, and the synthesis of proteins in the cell. In cell reproduction, students are introduced to concepts of asexual and sexual cell reproduction, mitosis and meiosis. In genetics the sub-topics include Mendelian genetics, non-Mendelian genetics, multiple alleles, codominance, incomplete dominance and sex linked inheritance. The subtopics within bacteria and bacterial control include bacterial structure and classification, the importance of bacteria, bacterial growth, and bacterial control. In the section on dental hygiene the structure and function of tooth, gingivitis and periodontal disease are covered. The subtopics within plants structure and classification include flower, pollination and fertilization, seed and fruit, germination, structure and function of root, stem and leaf, modification and photosynthesis. In AIDS/HIV, the sub-topics include the history and politics of AIDS, the HIV virus and its life cycle, pathogenesis, the spread of AIDS, diagnosis, and HIV testing, treatment, and prevention. Students integrate and apply their knowledge of the concepts they have learned throughout the year in a project on the tissue culture of African violet and Boston fern.

### **History: American History, Beginnings to The Civil War**

#### History: American History, Beginnings to The Civil War

Seventh grade history explores the history of the United States from the colonial period through the Civil War. This first half of American History is approached from the central concept of understanding the conflicts that developed the American identity. Students begin by exploring the reasons colonists had for leaving Britain and the differences that developed between these societies. As the year progresses, the focus will shift from this external conflict to the internal conflicts that shaped the nation. Students will focus on the following concepts: • Colonial America • Revolution • Building a Nation • Territorial Conflict • Social and Technological Change • Civil War

### **Religion**

The seventh grade religion program, Jesus the Way, focuses on the life and acts of Jesus. Confirmation is offered in either seventh or eighth grade depending on the year.

## **Eighth Grade**

### **English Language Arts**

In the final year of their Upper School journey, students intensify their studies as they prepare for high school. Themes found in texts this year include personal struggle, conflict, the role rules and laws, and morality. Students read a variety of texts that connect to their



studies in History class, including *To Kill a Mockingbird*, as well as short stories and poetry from the twentieth century to further understand the context and perspectives of this time.

Students explore several genres of writing throughout the year, including thematic essays on *To Kill a Mockingbird* and *The Lord of the Flies*, to a well-researched persuasive essay. In addition, students complete a poetry project which asks them to analyze a selected poem and compose an original piece. Students also write a character study for *Of Mice and Men* and *Old Man and the Sea*, along with an end of year personal reflection. This year students also engage in a Shakespeare study, expanding on their understanding on the power of language. This study also allows them to engage in the power of theater as it relates to literature.

Students study and follow formatting and style requirements to write expository papers in preparation for high school-level work. In addition to reviewing and engaging in the research process, students engage in creative writing through journal writing on a weekly basis. Students continue with their vocabulary studies, focusing on using context clues to understand the meanings of vocabulary words in the texts that they read. Students will also continue the Worldly Wise series, as it is an important way to become exposed to a variety of academic vocabulary outside of the literature that they read, and practice answering questions that might appear on standardized tests. Students also continue receiving formal grammar instruction. Students can expect bi-weekly vocabulary and grammar quizzes.

### **Mathematics: Geometry/Algebra**

In eighth grade students take Geometry with Algebra Applications. Students will explore the following geometric concepts:

• Points, Lines, Planes, and Angles • Deductive Reasoning • Parallel Lines and Planes • Congruent Triangles • Quadrilaterals • Inequalities in Geometry • Similar Polygons • Right Triangles • Circles • Areas of Plane Figures • Areas and Volumes of Solids • Coordinate Geometry

Text: Geometry. Jurgensen, R., Brown, R., & Jurgensen, J. McDougal Littell: Houghton Mifflin

### **Science: Introduction to Basic Chemistry and Physics**

The Basic Chemistry unit includes the following topics:

1) mass, volume and density; 2) matter and its properties; 3) the classification of matter; 4) atoms; 5) the periodic table; 6) chemical bonding; 7) electron configuration; 8) chemical reactions; 9) acid and base chemistry; and, 10) introduction to organic chemistry. Within the section on mass, volume and density, students are introduced to the identification of matter, the measurement of matter, the testing of matter, and the concepts of mass, weight, and density. In matter and its properties, the concepts covered include phases and phase changes, mixtures, solutions, elements and atoms, chemical symbols and compounds and molecules. The subtopics within the atoms section include Dalton's theory, J.J. Thomson's experiment and model, Rutherford's experiment and model, Bohr's model, modern atomic theory, subatomic particles, isotopes, mass number and average atomic mass. The subtopics within the periodic table section include the history of the periodic table, Mendeleev's contribution to the modern periodic table, the modern periodic table, and properties and uses of groups and families. The subtopics within chemical bonding include and, covalent bonds, ionic bonds, metallic bonds, Lewis electron dot diagrams and polyatomic ions. In chemical reactions, the concepts covered include naming inorganic compounds,

classifications of chemical reactions, balancing chemical equations, and exothermic and endothermic reactions. The subtopics within acid base chemistry and organic chemistry include properties of acids, properties of bases, pH, classification of carbohydrates, structure of proteins, and properties of lipids and fats. The Physical Science unit includes the following topics; 1) force and energy; 2) motion; 3) light and sound; 4) magnetism and electricity. Students also complete a research project called “Adopt An Element” where they research an element's history, chemical properties and its uses in their everyday lives and orally present it to the class.

### **History: American History, Reconstruction to Present Day**

Eighth grade history explores the history of the United States from Reconstruction to the Present Day. While in the first year of American history the primary focus was on the internal conflicts that shaped the American identity, the second half turns the focus outward. Students will continue to explore both internal and external conflicts, always placing them into a global context. They will identify how events around the world impacted the continued development of the nation and the role America played in major world events. Students will focus on the following concepts: • Reconstruction • Expansion • Social Change (1880s-1900s) • World War I • Roaring ‘20s • Great Depression and New Deal • World War II • Social Change Again (1950s-1970s) • Modern US

### **Religion**

The eighth grade religion program, *The Church Then and Now*, focuses on the history and development of the Church. Confirmation is offered in either seventh or eighth grade depending on the year.

## High School Acceptances

Academy graduates have been accepted into the following High Schools:

Berkley Carroll School	Manhattan/Hunter Science High School
Bronx High School of Science	Millennium Brooklyn High School
Brooklyn Friends School	Mount St. Mary Academy
Brooklyn Latin School	Notre Dame High School
Convent of the Sacred Heart	Oakcrest School
Dominican Academy	St. Vincent Ferrer High School
Dwight-Englewood School	St. John's Preparatory School
Fordham Preparatory School	Trevor Day School
Horace Mann School	United Nations International School
Leman School	Xavier High School
Loyola School	York Preparatory School
Marymount School of New York	