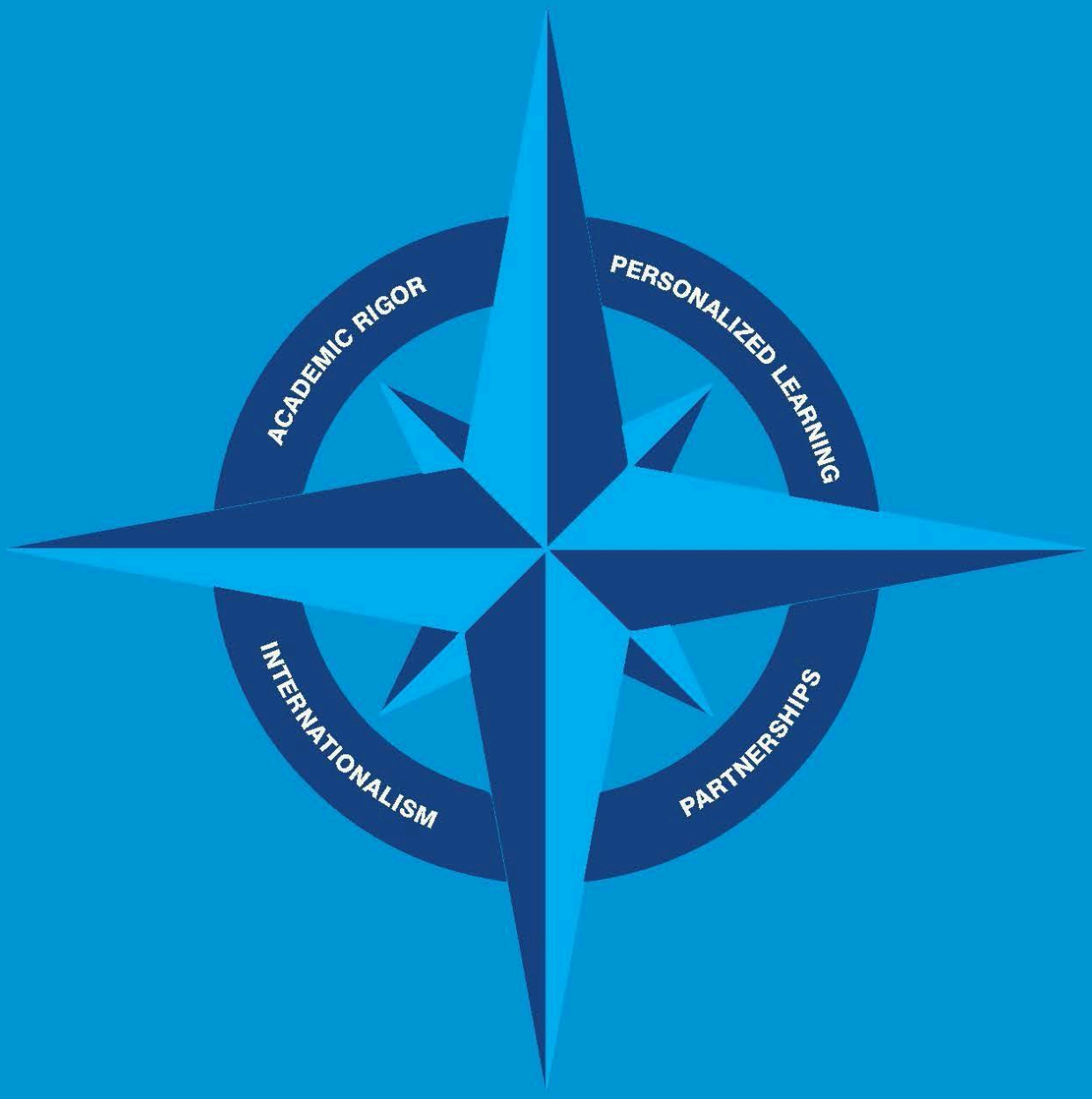


Lower School Curriculum Guide

2026-27

LÉMAN MANHATTAN
PREPARATORY SCHOOL

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Part I: Guiding Statements

Mission

Léman Manhattan is an International Baccalaureate World School that delivers an academically rigorous program and sets high expectations for students from early childhood through 12th grade. Serving our local neighborhoods and a diverse international community, we prepare students with the knowledge, confidence and fluency they need to engage in a rapidly changing world.

Léman challenges students' intellect and inspires their creativity. We encourage them to think critically and work collaboratively. Celebrating each student's individuality, we foster the skills they need to grow in mind, body and spirit. Our unifying mission is to instill a positive outlook in each of our students and a certainty for all they can achieve in life.

Léman Manhattan. Each student, future prepared.

Vision

The greatest lasting impact of a Léman education will be the achievement of our students and the contributions they make to their communities and to the world.

Preparing each student for a future filled with personal growth, fulfillment and success defines, unifies and inspires everyone and everything we do at Léman Manhattan.

Values

Our core values are the essential and enduring tenets of our school community. These principles, reflected in the Portrait of a Léman Manhattan Learner, guide all of our actions. At Léman, we firmly believe in the essential value of:

- Thinking critically and working collaboratively
- Achieving excellence through academic rigor
- Respecting diverse opinions and cultures
- Fostering meaningful student-teacher-parent partnerships
- Addressing each student's individual learning style
- Discovering passions and nurturing creativity
- Serving our local and global communities
- Encouraging independent thinking and decision-making
- Cultivating resilience and determination
- Instilling confidence and optimism
- Growing in mind, body and spirit
- Recognizing the importance of preparation for life

Inclusion Statement

Léman Manhattan Preparatory School is a community of diverse cultures, languages and countries of origin, which draws unity through the acknowledgement and celebration of our differences. As a mosaic of individuals who believe everyone should feel safe and respected, we strive to facilitate opportunities for meaningful engagement with openness and empathy. This process of communication is integral to fostering a just and harmonious place of learning.

Ours is an inclusive school where students, families, caregivers, faculty and staff are supported equally and where each unique identity, voice, ideological viewpoint and experience is valued. We honor all members of our community, diverse in: ability, age, appearance, belief system, citizenship, culture, family structure, gender, gender identity, language, learning style, national origin, political view, race, religion, sexual orientation, and socio-economic level and all other protected characteristics.

Committed to sustaining an environment free of harassment in any form, including bullying and discrimination, we maintain that the work of inclusion is a responsibility held by all and done for all, person to person. We embrace this challenging, yet rewarding opportunity and understand that this is an evolving work which enriches our lives.

Léman Manhattan Academic Plan

The Léman Manhattan Academic Plan is a framework from which we develop our learning programs. By focusing on eight distinct areas that create our unique academic experience, we can continuously refine and improve our students' experiences as they move through the four divisions of the school.



Léman Manhattan Four Pillars

At the foundation of our Academic Plan are our Four Pillars: Academic Rigor, Personalized Learning, Internationalism, and Partnerships. These pillars guide how we approach every area of the Academic Plan. Each element of the plan - whether curriculum design, assessment, community practices, or college readiness - draws strength and direction from the pillars.

Academic Rigor
Creating an environment which engages, challenges, and supports each student to take risks, activate curiosity, and think creatively in new and meaningful ways to develop and demonstrate deeper understanding.

Personalized Learning
Using assessment to create differentiated learning experiences for our students based on their abilities, their interests, and their style of learning.

Partnerships
Grounding our community connections, internships, and collaborative relationships that extend learning beyond the classroom, while also expanding access to varied, real-world experiences through the Collegio Institute.

Internationalism
Creating upstanding citizens who appreciate and thrive in a diverse learning environment that builds awareness of other cultures and acknowledges that they are part of a global community.



Part II: Support Services

Language Policy

The Léman Manhattan Language Policy, integral to Lemán Manhattan's philosophy and practice, creates a shared vision and mission to successfully implement Léman language programs and curriculum. It is comprehensive and school-wide and promotes a high-quality academic curriculum for advanced language proficiency in at least one language other than the mother tongue for all students. The policy also recognizes and embraces the central role language and culture play in the overall linguistic, cognitive, and academic development of Léman students.

Guiding Principles at Léman Manhattan, we:

1. Foster in students the ability to think and express themselves with precision, clarity, confidence, and imagination in at least one language other than the mother tongue. Provide an appropriate language and learning program in order to allow all students to access their curriculum in a supportive environment.
2. Involve all teachers in the language-teaching process, as language and learning are inextricably linked and fundamental to learning.
3. Value the student's first language and literacy as the foundation for second and third language acquisition and development. These are essential in establishing a firm foundation for thinking processes, in maintaining cultural identity, and in developing communicative and literacy competence.
4. Engage in meaningful and authentic learning experiences with well-designed programs since language acquisition and learning take place best in such an environment.
5. Firmly believe that language development in more than one language fosters personal growth and is essential to the development of international understanding.
6. Employ a variety of instructional methods in all areas of the curriculum to develop skills in reading, writing, speaking, and listening in the three communicative modes: interpretive, interpersonal, and presentational.
7. Provide opportunities for teachers and administrators to participate in relevant professional development in the areas of linguistic and cultural awareness.
8. Integrate the expression of cultural and linguistic heritage into all programs and facilitate cultural exchanges through the curriculum and special events.

Regarding English Language Learners (ELLs), Léman faculty believes and practices the following:

1. English is the primary medium of instruction; teachers work collaboratively to provide a program of English language learning for all students to address their academic needs.
2. All staff members are language teachers, independent of their core specialties, and are responsible for addressing and meeting the needs of all students of diverse linguistic and cultural backgrounds.
3. Parents are made aware of their important role in ensuring the development of their children's mother tongue and are encouraged to do so through a range of strategies to support their child's education, including enrollment in a mother tongue program.
4. At Léman Manhattan, we believe that ELL students are best educated in a sheltered instruction environment. When possible, our ELL students are instructed in a mainstream setting with ELL push-in and pull-out support, providing them access to content area standards as they develop English proficiency.
5. Students are supported with ESOL classes based on their English levels.

6. All staff members understand the needs of those students being educated in a language.

We have high expectations of our students' work, and Léman teachers are skilled at challenging children to consistently set and reach new goals. Faculty confer with students individually and in small groups, helping them to find their voice and advocate for themselves as they prepare for the transition to Middle School.

As a diverse school community, we continuously review our curriculum to embrace the beauty of our diversity, stressing the importance of equity, and ensuring inclusivity. Through thoughtful development of units of study, we are committed to presenting accurate information with an emphasis on multiple perspectives. Our programs reflect a conscious and programmatic commitment to develop inquiring, knowledgeable and caring future leaders who view themselves as global citizens looking for ways to create a better and more peaceful world through intercultural understanding and respect.

Our teachers provide thoughtful attention to each child's academic, social, and emotional development, and focus on building classroom communities in which children are inspired to explore, create, and grow as learners and young citizens of the world.

English for Speakers of Other Languages Program

The mission of the English for Speakers of Other Languages (ESOL) Program is to help students acquire proficiency in the English language, to ensure academic success, and to help them confidently participate and integrate as active members of the Léman Manhattan Preparatory School community.

We believe that all students should have equal access to the curriculum and should be immersed in mainstream classrooms whenever possible. The ESOL Department believes that high academic standards help promote language development for non-native English speakers. A culture of school-wide collaboration is adopted such that classroom content is made accessible and comprehensible for English language learners. Students are strongly encouraged to maintain their mother tongue, enhancing both cognitive development and English language acquisition.

Student Support Services

Léman Manhattan Preparatory School's main goal is to meet student needs through a differentiated, rigorous curriculum. We are committed to meeting the needs of all students through an increasingly comprehensive framework of curriculum, instruction, and assessment. Each division has a Student Support Team composed of trained Learning Specialists who collaborate with classroom teachers and administrators to identify a well-integrated system of instruction and intervention for students identified as in need of support and/or enrichment.

The role of the Student Support Services team is to ensure Léman Manhattan provides an inclusive PK through Grade 12 multidisciplinary student support system that respects learner differences, facilitates attainment of Léman Manhattan's high educational standards, and promotes the development of lifelong learners. The Student Support program is designed to secure and organize equitable access to all academic programs, including the International Baccalaureate (IB) programme. Student Support Services includes Learning Support, Counseling, and Nursing. A supplementary handbook focuses on providing specific information regarding Learning Support and Counseling services. Additional information about Health Services and Nursing may be found in the school handbook.

The Student Support Services department is guided by the following principles:

- Students build self-confidence and better prepare themselves to be lifelong learners by developing self-advocacy skills and by understanding their individual learning needs.
- It is important to work with the whole student (intellectually, socially, emotionally, and physically) from a position based on the student's strengths in an effort to address areas of concern.
- Learning styles may change as the child grows and developmental differences need to be considered, therefore resources should be flexible and allocated as needed.
- An effective student support program requires a team approach with all team members sharing responsibility for the student's learning. Teams may include students, parents, teachers, student support personnel, and administrators.
- Staying current with research and best practices helps the team determine how to address student needs.
- An effective support program is articulated in PK through Grade 12, including procedures and policies, assessments, entrance and exit criteria, transition plans, and other essential components.

Learning Support Services



Student Study Teams

Student study teams are multidisciplinary meetings hosted at the divisional level and led by the Director of Student Support Services or designee. These meetings provide an opportunity for teachers, administrators, and parents (when appropriate) to discuss concerns about student learning and/or behavior, and problem-solve to identify strategies and interventions that can be readily implemented by the classroom teacher, learning specialist, counselor, parent, or other appropriate staff member.

Special Education/Learning Resource

Students who do not show appropriate progress (i.e. meeting grade-level expectations) based on a variety of data from both the classroom and formal evaluations may receive supplemental instructional interventions, which are targeted and more individualized.

Standardized Testing

Measure of Academic Progress (MAP)
The Measure of Academic Progress (MAP) is an untimed, adaptive assessment taken on the computer in the areas of Reading, Language, and Math. As students answer questions correctly they are presented with more difficult questions. When students answer questions incorrectly, the test becomes easier. In other words, the test *adapts* to each student, gauging their specific learning level.

The students' MAP results will be reported in RIT scores (Abbreviated from Rausch Unit). This is a different type of score than a typical test that provides a percentage of answers correct. It is also different from many tests that provide results based on a student's score compared to others in his or her grade. Instead, the RIT score is an equal-interval scale, like meters and centimeters, that is independent of grade level.

MAP helps teachers guide student's academic instruction, whether it be to reinforce concepts or provide more challenges. It is important to keep in mind that students are evaluated by looking at the whole child using MAP scores as one of *many* measures for assessment. *Looking only at one score would not accurately capture any student's ability or performance.*

Technology, Library, And Information Connections

Technology
At Léman Manhattan, the Head of Technology, the Librarians, and the Educational Technology Integradors work as a team to collaborate on technology support, information literacy instruction and STEM experiences for each grade. They facilitate the physical infrastructure and support successful and ongoing integration across the curriculum in the Lower School, collaborating with faculty to plan, execute, and evaluate curricular units that engage and challenge students.

Technology and media are tools that are effective only when used appropriately. Passive use of technology and any type of screen media is an inappropriate replacement for active play, engagement with other children, and interactions with adults. At Léman Manhattan, our teachers, supported by the Director of Educational Technology, have the knowledge, skills, and experience to select and use technology tools and interactive media that suit the ages and developmental levels of the children in their care, and they know when and how to integrate technology into the program effectively. Students in Kindergarten to Grade 1 are part of a 1-to 1 iPad program and students from Grade 2 to Grade 5 are part of a 1-to-1 Chromebook program.

The Wonder Lab is a space of constant evolution, a space for exploration, planning, and collaboration where learning and creativity happen in a playful manner. Its mission is to create inquiry-based experiences that transform learning. It incorporates a Green Screen to be used in video projects, an Epic Duplo Wall for students to create Duplo art and Duplo vertical projects, an age-appropriate Makedo Cardboard Station for "messy" construction and prototyping, a Chalkboard Wall for brainstorming and idea visualization, and a Snap Circuits wall for controlled discovery of technology via experimentation with circuits. We offer a range of screen-free robotics that introduce our youngest learners to the basics of programming and coding, encouraging problem-solving, collaboration, and creativity from the very start.

These tools, along with expert facilitation, allow students to gain a better understanding of cause and effect and problem-solving, which are the building blocks to the design and coding processes. Because of its participatory nature, the Wonder Lab and Innovation Center foster opportunities for children to "think outside the box" and use their innate curiosity to become innovators, creators, and risk-takers. These shared spaces allow children to work together and communicate with their peers, providing opportunities to build on each other's ideas and develop the skills of negotiation-a key attribute to becoming an open-minded, caring member of the community. The work that students do in the Wonder Lab and Innovation Center reflects and reinforces the Portrait of a Léman Manhattan Learner.

Lastly, technology tools at Léman Manhattan support the ways our educators measure and record development, document growth, plan activities, and share information with students, families, and the school community in general. We use class pages on our Learning Management System that include announcements, assignments, calendars, resources, photographs as well as audio and video recordings to document, archive, and share a child's accomplishments and developmental progression with families.

Library

Uniquely situated as a shared resource for the entire lower school community, the Lower School library is a welcoming place for gathering, learning, exploring, creating and, of course, reading.

The mission of the library curriculum is to promote a love of reading, provide access to diverse information and ideas, and to equip students with the skills they need. Lower School students have weekly scheduled library classes but may also visit the library as needed, including before and after school. In addition to supporting and enriching the classroom curriculum, the library program exposes students to a wide variety of literature and teaches specific literacy and information skills. Gradually, each child is equipped with the skills to become independent library users and critical researchers. Younger children begin by learning how books are made and to care for them. They also learn how books can be classified and organized and how to locate the books they love. Older children learn specific organizational systems like the Dewey Decimal system, how to use the online catalog and self-checkout procedures. They learn research skills beginning with how to locate appropriate print and digital resources. Critical thinking is stressed as they learn to evaluate information for accuracy, currency, bias and usefulness. Finally, students learn how to be ethical and responsible users of information, including how to make appropriate citations.

Most importantly, the Léman Manhattan Library program is designed to foster a general love for reading, literature, and information. All children are exposed to a wide variety of literature. They explore genres in depth and study folktales, poetry as well as non-fiction. We hope to broaden their perspectives and enlarge their worlds, using literature as a way to celebrate and explore a diversity of lives and experiences. The library also provides opportunities for students to learn more about the process of creating books by hosting several children's book authors and illustrators each year.

Part III: Student Life

Extracurricular Activities, Clubs, And Athletics

Léman Plus After-School Program

The Léman Plus AfterSchool Program (L+) offers a wide variety of enrichment classes to children in Kindergarten through 5th grade. The program allows students to select from course listings that change each semester ("Fall" and "Spring") in athletics and aquatics, visual and performing arts, STEM, and much more. The classes are designed to encourage students to pursue existing passions, develop new interests, enhance academic learning, build social skills, and broaden their horizons outside of the curricular day. L+ offers classes in chess, coding, musical theater, swimming, soccer, cooking, science, and many other areas. L+ employs individuals and carefully selected outside program partners to offer outstanding courses to our students. Courses vary based on availability. Please refer to our website for up-to-date offerings.

Part IV: Academic Offerings

Lower School Program

In Léman Manhattan's Lower School, students find their passions. As a result, they become independent thinkers and competent decision makers who are excited to learn. We offer a diverse program that encourages students to reach their academic, social, and emotional potential in a challenging yet supportive environment.

In addition to emphasizing proficiency in reading, writing, and mathematics, our Lower School program focuses on the humanities, science, world languages, and physical education. Music and visual arts are also an integral part of our curriculum, as they help to develop creativity, open-ended thinking, and collaboration.

Using the workshop model to structure our language arts and literacy curriculum, students in the Lower School gain the skills needed to read, write, analyze, compare, and discuss text across a variety of genres. In addition, students in grades PK4-Grade 3 receive targeted phonics instruction. At Léman we embrace a structured literacy approach grounded in the science of reading to make learning to read fun while laying the groundwork for lifelong literacy. In Grades 4 and 5, instruction shifts to a more complex study of words: morphology, vocabulary development, and language conventions. Students apply these to craft more powerful writing and deepen literary comprehension.

Our rigorous math curriculum builds conceptual understanding utilizing varied instructional practices, such as hands-on activities, games, fact practice, and daily routines. Students connect mathematical concepts to everyday situations with an emphasis on problem solving, critical thinking, and exploration of multiple strategies. The curriculum provides repeated exposure to mathematical concepts to build skills.

Students engage in the scientific process through observation and hypothesis, doing the work of real scientists in the Lab and the outside world. They develop an analytical mindset through inquiry, and test their understanding through designing, conducting, and reflecting on experimental

investigations.

Lower School students enjoy a robust arts education program. In visual arts, students explore a variety of mediums and techniques through hands-on projects and guided instruction which allows them to unleash their imagination and develop artistic skills. Our award-winning music program focuses on developing musicianship, musical literacy, ensemble skills, and composition. From singing and playing instruments to composing and exploring different different cultures and genres, students develop musical skills and expression while cultivating creativity and teamwork.

Personalized Learning Plans

Beginning in First Grade, the Personalized Learning Plans (PLPs) uniquely demonstrate Léman Manhattan's commitment to the growth and development of every student. Léman Manhattan believes that education is a partnership among the student, home, and school. In keeping with our Léman Learner profile, we want our students to be knowledgeable, curious, and reflective thinkers. Léman understands that in order to maintain a high level of engagement and motivation in their education, students must have a sense of ownership for their schooling and an understanding of the qualities that make for a successful life-long learner. The PLP is one way of achieving this as it provides students with an individual goal that is driven by their passions, interests, and aspirations while incorporating both academic and Habits and Attitudes of Learning (HAL) components.

Building the PLP is a collaborative process to which all partners (teachers, families, and students) contribute. It is a call to action by the teacher, the student, and the family with everyone in agreement of their role in the achievement of the plan. Work on the passion-driven project will occur mostly at school. We teach our students that the process is as important and meaningful as the product. We will also provide students with the tools to organize and persevere with an extended research project or learning activity based on a topic of the student's choosing. Students and teachers will document progress and provide personal reflections on their PLPs. Projects are presented in the spring.

Habits and Attitudes of Learning

Community citizenship, inquiry, ownership and independence, work habits, perseverance, and communication are the Habits and Attitudes of Learning (HAL) at Léman Manhattan. Following a Responsive Classroom approach, students work within their homerooms each year to create class practices aimed at providing an environment where all children can achieve their hopes and dreams. Each day begins with a morning meeting, setting the tone for the day and welcoming all students as members of the class and school community. Through daily interactions with peers, they work together to achieve common goals and learn to listen to others with understanding and empathy.

- **Community Citizenship:** Follows classroom and school agreements; considers the impact his or her decisions make on others; and works well with others towards a common goal.
- **Inquiry:** Asks questions and is open to new ideas and perspectives; takes risks; and demonstrates a desire to grow continually as a reflective learner.
- **Ownership and Independence:** Initiates and follows through; strives for personal best; and exhibits self-management.
- **Work Habits:** Uses available resources to support her or his learning; strives for accuracy; and takes on and completes tasks in a timely manner.
- **Perseverance:** Persists through challenges; open to learning from mistakes; and uses various strategies to complete tasks.
- **Communication:** Participates in a range of conversations and collaborations with others; expresses his or her ideas clearly; and listens not only to respond, but to elaborate and/or expand on their ideas.

Curriculum Philosophies

The following curriculum philosophies were created by members of the Pre-K to 12th Grade Department/Vertical Teams. For more specific information, please refer to the grade-level descriptions.

Language Arts

The study of the human experience is central to Language Arts. At Léman Manhattan, we recognize the power of literature to unlock empathy and international-mindedness. The invitation to analyze a text, whether visual or written, is a call to hone one's critical thinking and interpretive sensitivity. Our students develop a keen awareness of purpose and audience as they explore different modes of writing, develop their own unique voices as writers, and articulate ideas with clarity and expression.

World Languages

The World Languages Department believes in teaching students to develop their global awareness and to communicate in a variety of languages. World Language courses provide opportunities for students to have a deeper understanding and appreciation of other cultures through learning language. Léman Manhattan provides rigorous courses in Mandarin, Spanish, and French. All courses ensure development in the core language skills: listening, speaking, reading, and writing in the three communicative modes: interpretive, interpersonal, and presentational. Students acquire language through differentiated learning approaches that stimulate meaningful and authentic communication in the target language (TL). Through studying language, students are exposed to diverse perspectives, practices, and products of the target language's cultures around the world.

From Pre-K to 12th Grade, our spiraled curriculum ensures progression and development of the essential skills needed to become proficient in another language. In High School, students may choose to take a second language as an elective and continue to study one of those languages if they enter the IB Diploma Program in 11th grade. All students are strongly encouraged to apply to participate in the World Language trip to their country of study. This is a language and culture immersion and exchange experience that involves a homestay and service work in the host country. Through language learning at Léman Manhattan, students are provided with the knowledge, skills, and cultural understanding that they need to be engaged citizens of the world.

Social Studies

The Social Studies Department at Léman Manhattan Preparatory School promotes critical thinking skills, research, reading, and writing abilities, international-mindedness, and collaborative learning. As students learn how the past informs the present, they spend a great deal of time analyzing primary and secondary historical sources to generate the types of work done by historians and other social scientists. Learning is structured by deriving understanding from a variety of perspectives, organized into five core historical lenses: history; geography; culture and society; government; economics and technology. Integration of the Pollyanna Racial Literacy Curriculum helps to enrich our social studies program and contribute to our students' journey of understanding of diversity, equity, inclusion, and justice.

Science

Students in kindergarten through fifth grade begin to develop an understanding of the four disciplinary core ideas: physical sciences; life sciences; earth and space sciences; and engineering, technology, and applications of science. In the earlier grades, students begin by recognizing patterns and formulating answers to questions about the world around them. By the end of fifth grade,

students are able to demonstrate grade-appropriate proficiency in gathering, describing, and using information about the natural and designed world(s). The performance expectations in elementary school grade bands develop ideas and skills that will allow students to explain more complex phenomena in the four disciplines as they progress to middle school and high school. While the performance expectations shown in kindergarten through fifth grade couple particular practices with specific disciplinary core ideas, instructional decisions should include use of many practices that lead to the performance expectations.

Our curriculum reflects a three-dimensional approach that conveys the core ideas and practices around which science and engineering education in these grades should be built. These three dimensions are: crosscutting concepts that unify the study of science through their common application across science and engineering; scientific and engineering practices; and disciplinary core ideas in the physical sciences, life sciences, and earth and space sciences and for engineering, technology, and the applications of science.

Mathematics
The Mathematics Department at Léman Manhattan strives for students to think critically, communicate effectively, and apply math in real-life situations. Students build a strong base in mathematical skills and knowledge through our hands-on, differentiated approach to learning. We continue to build upon these skills through a variety of teaching resources and strategies. Students graduate Léman Manhattan as lifelong learners of mathematics who are prepared for university and beyond.

Fine Arts
We believe that artistic experiences enrich students' lives, cultivate creative and inventive thought, and provide unique opportunities for self-discovery and reflection. It is through consistent involvement in the Arts that skills are refined, appreciations are formed, and creativity is enhanced. Whether in the classroom, studio, or on the stage, our artists, musicians, and actors are challenged to achieve their best work as they develop both artistic and life skills. Through rigorous and creative class experiences, as well as a variety of extra-curricular opportunities, our students are inspired as they actively participate in the creative process as individuals and collaborators. As a result of their Fine Arts experiences, we hope that Léman Manhattan graduates will be lifelong learners who value the Arts as a dynamic contributing force, enriching not only their own lives, but also the lives of the greater community.

Physical Education
Physical Education is an essential part of the Léman Manhattan curriculum and is structured to promote lifetime fitness through participation in cooperative activities and team sports. The program inspires students to adopt lifelong physical skills gaining knowledge of movement and sports skills/activities. Our diverse curriculum promotes creativity while fostering teamwork and opportunities for all learners to be successful. The program builds relationships, strengthens physical skills and provides students with the building blocks to live a healthy balanced literacy.

Curricular Program by Grade

Kindergarten

Early Literacy

Using a balanced literacy approach, we intertwine phonemic awareness and phonics with reading and writing workshops to ensure our students develop strong foundational skills. The integration of interactive read-alouds, small-group work, collaborative-partner reading, and individual conferences provide each student with differentiated opportunities to achieve their personal literacy goals.

Phonemic Awareness and Phonics

To support development in reading and writing, phonological awareness is strengthened through rhyme, segmenting, blending, and manipulating phonemes. Additionally, students are exposed to foundational spelling patterns and high-frequency sight words. Throughout the year students engage in a multisensory approach to review the alphabet and learn each letter's corresponding short and long sound, digraphs, blends, and silent "e". Corresponding with the introduction of each letter, students are taught motor-plans for writing lowercase letters.

Reading

Students build strong foundational reading skills by reading books at their independent reading level and practicing reading strategies such as: using known sounds, background knowledge or schema along with using picture cues and matching spoken words to the printed text. These skills are reinforced in small, differentiated groups during reading workshops. To develop reading comprehension skills, children are encouraged to make predictions, explain personal connections, and discuss stories with their peers. Children also participate in shared reading to focus on the various elements of a story including the characters, setting, problem, solution, and main ideas. Reading units, both fiction and nonfiction, provide students opportunities to determine similarities and differences across texts and draw conclusions.

Writing

Children practice the writing process as they build their understanding of letters and sounds. They are given many opportunities to express their thoughts and ideas through drawing, dictation, labeling, and using inventive spelling. Students learn to brainstorm, organize their ideas, reread their work, and collaborate with their peers as they celebrate the writing process. Students build independence by using environmental tools such as the Word Wall, anchor charts, and mentor texts. Throughout the year students confer individually with teachers to review their writing and reflect on their personal goals. Writing units include narratives, pattern books, informational, how-to books, opinion-writing pieces, as well as writing across the curriculum.

Mathematics

In Mathematics, students develop problem-solving and critical-thinking skills by working with manipulatives, such as pattern blocks, counters, colored tiles, and unifix cubes. These tools are used to strengthen a sense of quantity, understanding of numerical relationships, as well as ways to identify, create, and extend patterns.

Students work to build their number sense by counting objects, recognizing numbers, building combinations of one and two-digit numbers, and creating and solving basic equations. Students also work to develop their skills of measurement, sorting, composing and decomposing number

combinations, as well as time, through a variety of engaging activities. They learn to identify and describe shapes and analyze, compare, create, and compose geometric figures.

Social Studies
In Kindergarten, students study “Self and Others.” The course is organized into five themes—Individual Development and Cultural Identity; Civic Ideals and Practices; Geography, Humans, and the Environment; Time, Continuity, and Change; and Economic Systems. Each theme helps students study themselves in the context of their immediate surroundings. Students will learn about the similarities and differences between children, families, and communities, as well as the holidays, symbols and traditions that unite us as Americans. Students learn about respect for others, and rights and responsibilities of individuals.

Units of Study for Kindergarten: My School and School Community, Self and Others: Individual Development and Cultural Identity, Geography, People, and Environment, and Family Changes over Time

Science
Across the school year, kindergartners focus on the three domains of science; physical science, earth science, and life science. The performance expectations in kindergarten help students formulate answers to questions such as the following:

- What happens if you push or pull an object harder?
- Where do animals live and why do they live there?
- What is the weather like today and how is it different from yesterday?

Students are able to apply an understanding of the effects of different strengths or different directions of pushes and pulls on the motion of an object to analyze a design solution. Students are expected to develop understanding of patterns and variations in local weather and the purpose of weather forecasting to prepare for, and respond to, severe weather. Students are also expected to develop understanding of what plants and animals (including humans) need to survive and the relationship between their needs and where they live.

The crosscutting concepts of patterns; cause and effect; systems and system models; interdependence of science, engineering, and technology; and influence of engineering, technology, and science on society and the natural world are called out as organizing concepts for these disciplinary core ideas.

In the kindergarten performance expectations, students are expected to demonstrate grade-appropriate proficiency in asking questions, developing and using models, planning and carrying out investigations, analyzing and interpreting data, designing solutions, engaging in argument from evidence, and obtaining, evaluating, and communicating information. Students are expected to use these practices to demonstrate understanding of the core ideas.

Units of Study for Kindergarten: Animals, Plants, and their Environments, Weather and Climate, Pushes and Pulls

World Language
In Kindergarten, we use a variety of familiar themes to expose students to the meaning of the language, preparing them for more advanced language acquisition in future years. Students learn Mandarin, Spanish, or French through stories, games, songs, and music. World Language lessons are

taught in comprehension-based communicative language approaches which allow students to access the meaning of the language through what they hear and read and interact through interpersonal communication in writing and speaking. Students learn all content in very familiar, simple, and engaging contexts in order to receive the language input they need to develop proficiency in listening, speaking, reading, and writing.

Through learning language, students are also exposed to cultural celebrations from different countries through songs, poems, expressions, projects, and lifestyles.

Visual Arts
Students tap into their imagination while experimenting with various artistic media. Their fine motor skills and spatial understanding develop and grow as they create each piece. We begin with painting. Using a limited palette, the students explore the primary colors and determine how secondary colors can be made. Students work to cover their whole paper with many colors. We continue with collage, examining the work of Eric Carle, cutting up the painted papers we make, and using them to create fish, parks, people, and abstract designs.

After working in two dimensions, students start thinking about how to take their work off the page. We look at work by sculptors such as Richard Serra, an artist whose work is all about standing, leaning, and balancing. We lean, stand, and balance cardboard to create 3D structures. We continue to think sculpturally when we work with clay. We roll clay into balls and coils, and pinch and pull the clay to make various clay formations. We learn about the different stages of clay: wet, air dry, bisque, and glaze. Students will continue to work three dimensionally by creating wood sculptures inspired by the work of Ugo Rondinone.

The semester ends with different forms of weaving and interlocking materials. We make paper and stick weavings called “God’s Eyes.” Each project involves following a pattern of action, such as under/over, over/wrap around, and fold/turn. These actions create a pattern in the projects, which become clearer as the projects near completion.

Music
In Kindergarten Music, vocal technique, ear training, musicianship, and music literacy are developed through a variety of structured and engaging activities. Echo singing of tonal patterns and melodies continues to be an important part of every class. Students practice using their singing voice to match pitch while singing together as a full class, in small groups, and independently, using singing posture and listening skills to improve tone quality. Students continue to create tonal and rhythm patterns and play pitched and non-pitched percussion instruments.

Physical Education
Students spend the first few weeks of school learning the rules and routines of physical education. A safe environment is necessary to nurture a positive experience. From the very first day of class, students gain knowledge about lifelong fitness in a safe and fun manner. Throughout the year, students learn about spatial and body awareness, directional concepts, and locomotive skills. Through creative games and activities, cooperation, and fine and gross motor skills are developed. Locomotive movements such as skipping, galloping, tiptoeing, and running are skills that are continuously reviewed throughout the year. Creative movement is a large part of our curriculum. Students enjoy our animal unit where they explore the movements of other animals. From slithering like a snake to crawling like a spider, students widen their imagination while strengthening muscles

and working on key movement skills. Students also participate in a mini yoga unit exploring the cobra, cat, cow, and downward facing dog poses.

Learning how to aim is very important to the development of hand-eye coordination, and students practice tossing and catching to themselves as well as with a partner and throwing or rolling objects at target to sharpen these skills. Our curriculum is integrated, and we try to reinforce many of the concepts that are being taught in the classroom in physical education, including our study of the four seasons, pattern development, and the alphabet and animal movements. During our circus unit, students learn how to juggle scarves, walk on bucket stilts, and practice balancing. We conclude the year playing games that reinforce problem solving and cooperation.

Swim
A safe environment is necessary to nurture a positive experience in the water. Students spend the first few weeks of school learning about water safety. We discuss the importance of following the rules and how they can help us become more productive swimmers. Throughout the year, students learn and practice exhaling underwater or “blowing bubbles”, floating (supine and prone floating), streamline ready position, and flutter kicking. Differentiated instruction is crucial to the swimming development of each student. Students often work in small skills-based groups to ensure each student receives the attention they require to progress. As the skill level of the student progresses, they will learn how to combine multiple skills, such as the transition from “ready position” to streamlining off the wall and gliding while exhaling from their nose. These are the beginning steps to learning the front crawl stroke. With practice, students will be challenged to complete a 25-yard swim.

Wonder Lab
The Wonder Lab is a space where our youngest learners begin their journey as makers, coders, and designers. Through playful inquiry, students explore foundational concepts in design thinking, robotics, and digital citizenship. Hands-on materials such as blocks, legos, the Duplo Wall, cardboard, recycled materials, and much more are used for creative projects and design challenges. Technology tools such as screen-free robots, circuit boards, and the Green Screen provide age-appropriate entry points for experimentation and digital literacy. Children are encouraged to ask questions, test their ideas, and collaborate with peers as they develop an early understanding of how technology and design can be used to solve problems. Each class engages in Wonder Lab once per week, with additional opportunities to return for interdisciplinary projects co-taught with homeroom teachers and specialist partners.

First Grade

Reading
Reading is implemented through a balanced literacy workshop approach which consists of guided reading, independent reading, shared reading, small-group work, and word work. Whole group students observe teachers and engage in practicing how to utilize key skills and specific strategies. Following the mini-lesson, students independently select books from their book bags and have the opportunity to practice these skills in text that match them as readers. Students confer one-on-one or in small groups throughout the week with a teacher and receive feedback that helps each student to establish individual goals. Areas of study include building good reading habits, applying flexible decoding strategies, interacting with the text to foster strong comprehension, analyzing character traits, exploring nonfiction, and reading across genres. Throughout the year, students continue to build upon reading for meaning and understanding.

Reading skills introduced and reinforced include building automaticity with sight words, using clues to determine the meaning of a word or phrase, reading with fluency, making connections, asking questions, testing predictions, and beginning to infer the author's meaning that may not be explicit in the text.

Writing
Students develop their unique voice during the workshop model as they learn the writing process. Beginning with a mini-lesson, followed by extensive independent writing time supported by teachers and partners, workshop concludes with sharing of student work. Areas of study include personal narrative, informational books, opinion pieces, fiction, poetry, and writing like a scientist. Spelling is integrated through the explicit instruction of patterns and high-frequency words using a multisensory approach.

Over the course of the year, students develop the skills necessary to support their growth as authors across various genres. These skills include the ability to generate ideas independently, organize their writing sequentially and include descriptive language. Throughout writing units of study, students learn strategies for supporting their ideas with evidence from their lives and text. Students also discover how to strengthen their writing through the revision and editing process, including applying appropriate conventions.

Mathematics
Large group, small group, and individual work affords students many opportunities for rich math learning. Our rigorous curriculum utilizes balanced instruction through hands-on activities, conversations, problem solving notebooks, games, and independent math work. Students connect mathematical concepts to everyday situations with an emphasis on problem solving, critical thinking, and exploration of multiple strategies. The curriculum provides repeated exposure to mathematical concepts and skills to increase mastery. Topics of study include patterns in counting, place value, operations, measurement, data and graphing, and geometry.

Skills reinforced throughout the year include reading, writing, and representing numbers, as well as comparing and ordering numbers. Students learn to apply strategies and use mathematical tools in order to solve equations and number stories, as well as tojustify their thinking verbally, with models, and in writing.

Social Studies
“My Family and Other Families, Now and Long Ago” is organized around the same five themes that organize Kindergarten Social Studies—Individual Development and Cultural Identity; Civic Ideals and Practices; Geography, Humans, and the Environment; Time, Continuity, and Change; and Economic Systems. Students examine families and develop an awareness of cultural diversity within American culture. Responsible citizenship is introduced, as well as the role of authority in making rules and laws. The students will increase their geography skills through the use of maps and directions. Economic terminology and principles are introduced in the context of family resources, as well as in making economic decisions.

Units of Study for Grade 1: Families and Communities are Important, Families Now and Long Ago, The Community, We are Part of a Larger Community, Community Economics

Science
Across the school year first graders focus on the three domains of science: physical science, earth, science, and life science. The performance expectations in first grade help students formulate answers to questions such as:

- What happens when materials vibrate?
- What happens when there is no light?
- What are some ways plants and animals meet their needs so that they can survive and grow?
- How are parents and their children similar and different?
- What objects are in the sky and how do they seem to move?

Students are expected to develop understanding of the relationship between sound and vibrating materials as well as between the availability of light and ability to see objects. The idea that light travels from place to place can be understood by students at this level through determining the effect of placing objects made with different materials in the path of a beam of light. Students also develop an understanding of how plants and animals use their external parts to help them survive, grow, and meet their needs as well as how behaviors of parents and offspring help the offspring survive. The understanding is developed that young plants and animals are like, but not exactly the same as, their parents. Students are able to observe, describe, and predict some patterns of the movement of objects in the sky.

The crosscutting concepts of patterns; cause and effect; structure and function; and influence of engineering, technology, and science on society and the natural world are called out as organizing concepts for these disciplinary core ideas.

In the first grade performance expectations, students are expected to demonstrate grade-appropriate proficiency in planning and carrying out investigations, analyzing and interpreting data, constructing explanations and designing solutions, and obtaining, evaluating, and communicating information. Students are expected to use these practices to demonstrate understanding of the core ideas.

Units of Study for Grade 1: Light and Sound, Space Systems: Patterns and Cycles, Structure, Function, and Information Processing

Mandarin
In 1st Grade Mandarin, students review and build on previously learned material. The goal is for students to feel comfortable interpreting Mandarin through listening and the reading of words in pinyin, so that they can begin to mimic what they hear and see in the language. Students learn how to interpret, and sometimes produce, basic communication about themselves including, but not limited to, their name, age, feelings, descriptions, likes and dislikes. Some of the course content includes colors, numbers, school, family, weather, clothing, food, places to go, and animals. By the end of the course, students will be able to copy sentence segments and word lists in writing pinyin and singular characters, as well respond to basic familiar questions through speaking or mimicking words, lists, or simple memorized phrases. Through learning language, students are also exposed to cultural celebrations from different Mandarin-speaking countries.

Spanish
In 1st Grade Spanish, students review and build on previously learned material. The goal is for students to feel comfortable interpreting Spanish through listening and reading, so that they can

begin to mimic what they hear and see in the language. Students learn how to interpret, and sometimes produce, basic communication about themselves including, but not limited to, their name, age, feelings, descriptions, likes and dislikes. Some of the course content includes colors, numbers, school, family, weather, clothing, food, places to go, and animals. Through learning language, students are also exposed to cultural celebrations from different Hispanic countries. Students learn to be culturally sympathetic by studying different Spanish speaking countries and exploring the identities of Spanish speakers through songs, poems, expressions, projects and lifestyles.

French
In 1st Grade French, students review and build on previously learned material. The goal is for students to feel comfortable interpreting French through listening and reading, so that they can begin to mimic what they hear and see in the language. Students learn how to interpret, and sometimes produce, basic communication about themselves including, but not limited to, their name, age, feelings, descriptions, likes and dislikes. Students study vocabulary related to colors, numbers, school, family, weather, clothing, food, places to go, and animals. Through learning language, students are also exposed to cultural celebrations from different Francophone countries.

Visual Arts
Students are encouraged to explore the qualities of the materials used, to experiment and problem solve, to express their own ideas, and to reflect on finished work.

Our focus in 1st Grade is cityscapes. We begin our theme of urban landscape by looking at Romare Bearden's The Block and create mixed-media street collages. We think about how the city is built down, as well as up, we look at David Macaulay's Underground, and students make above-ground/underground drawings. We continue this idea during our printing project, creating two printing plates, one for above-ground and one for underground, and joining the two to create a single two-color print.

We then work in three-dimensions to create a ceramic building using slabs of clay. Through this project, students learn to score and slip the clay in order to attach any details and to join the edges of the building.

Students also learn to collaborate through the making of a large group cityscape. Through woodworking, students populate the city with people and cars made from wood. This unit teaches students how to use straight and coping saws, safety goggles, files, c-clamps, hammers, and wood glue to build their projects.

Music
In 1st Grade, students build on the skills and concepts introduced in Kindergarten, developing foundational musicianship skills and instrumental technique. Throughout the year, students use their singing voice to match pitches in tonal patterns and repertoire. Students echo solfège tonal patterns independently and together in addition to performing folk songs. Music class incorporates movement, helping students feel the connection between what they hear and how they move their bodies. This whole-body connection lays the foundation for all musical learning.

Throughout the year, students develop melodic and rhythm skills on a variety of instruments. Students work together to play and create simple melodies on the hand bells. Playing handbells fosters fine motor skills and cognitive development as well as hearing and pattern recognition.

Students develop their dexterity and ability to sing and play at the same time as they learn chords and short melodies on the ukulele. Students also continue to explore non-pitched percussion instruments, such as the Cajon. They develop their literacy by reading and composing using quarter notes, eighth notes, half notes, and whole notes.

Physical Education
In 1st Grade, students participate in both competitive and cooperative activities. Our curriculum offers a balance that allows each student to be successful throughout the school year.

Through warm-up games and activities students strengthen their spatial and body awareness, locomotive skills such as skipping, galloping, and running. Students will participate in a variety of beginner-team sport units which include soccer, basketball, pillow polo hockey, kickball, and tennis, focusing on developing eye-hand and eye-foot coordination. Our cooperative units include parachute manipulation and bowling. The circus arts unit incorporates all of the above skills and introduces beginning steps of juggling scarves, plate spinning, and walking with bucket stilts. The culmination of the school year is our Lower School Sports Day. On this day students compete in relay races and activities, displaying good sportsmanship and respect for classmates.

Swim
Students spend the first few weeks of school learning about water safety, which includes Leman's pool rules and routines. We discuss the importance of following the rules and how they can help us become safe swimmers.

Throughout the year, students learn skills that are essential to swimming and lifesaving. Students review exhaling underwater, floating (supine and prone floating), streamline-ready position, and kicking. Differentiated instruction is crucial to the swimming development of each child. Students often work in small skills-based groups to ensure each child receives the attention they require to progress. Students are also taught to combine skills, such as how to streamline off the wall and glide while exhaling from their nose as they begin a flutter kick. These are the beginning steps to learning the front crawl stroke. With practice, students will be challenged to complete a 50-yard swim.

Wonder Lab
The Wonder Lab is a space where our youngest learners begin their journey as makers, coders, and designers. Through playful inquiry, students explore foundational concepts in design thinking, robotics, and digital citizenship. Hands-on materials such as blocks, legos, the Duplo Wall, cardboard, recycled materials, and much more are used for creative projects and design challenges. Technology tools such as screen-free robots, circuit boards, and the Green Screen provide age-appropriate entry points for experimentation and digital literacy. Children are encouraged to ask questions, test their ideas, and collaborate with peers as they develop an early understanding of how technology and design can be used to solve problems. Each class engages in Wonder Lab once per week, with additional opportunities to return for interdisciplinary projects co-taught with homeroom teachers and specialist partners.

Second Grade

Reading
The year begins with students developing an independent reading life through the study of a variety of genres. Students learn how to choose books at their independent reading level, apply decoding strategies, find the meanings of words, and develop reading comprehension skills. While reading

non-fiction, students use text features to further develop their understanding of informational texts. As students read realistic fiction, they identify character traits, motivations, actions, and feelings. Additionally, students compare, contrast, and make connections to characters, themselves, others, and the world. They generate predictions and make inferences based on implicit and explicit information from a text. As we wrap up the year, students eagerly await the excitement of engaging in book club conversations for the first time and responding to text through writing, partnership talks, and conferring.

Students build upon their foundational reading skills and become fluent readers who demonstrate understanding of what they read. The workshop model provides opportunities for students to learn, develop, and apply reading comprehension strategies. Students establish reading routines by selecting books at their independent reading levels and from a variety of genres. Students independently apply new reading strategies and behaviors. Each student has one-on-one conferences with the teacher to address specific reading strategies based on individual needs. Key concepts covered in the curriculum include making connections to the world, to other texts, and to themselves, questioning the text, making inferences, and answering questions.

Writing

The workshop model provides a framework in which students learn to cultivate and understand narrative, expository information, opinion writing, and poetry. Students travel through the writing process by drafting, revising, editing, and publishing. Students build independence throughout the writing process with teacher and author mentorship. During one-on-one conferences, partner shares, and rotating group shares, students work to develop the skills needed to enhance their skills as a writer.

Writing across many genres fosters the students' ability to independently apply a variety of writing skills. Throughout the narrative units, students learn to generate ideas independently, write sequentially, and include details to describe actions, thoughts, and feelings. When studying expository writing, students learn to introduce a topic and use facts and definitions to develop points. Opinion writing provides students an opportunity to supply reasons which support a point of view and use linking words to connect their opinion with fact and reason. Second Graders understand their writing benefits from planning, revising, and editing. Upon finishing a draft, students go back through their work to revise and make their writing stronger. During the editing process students are expected to check spelling, punctuation, and capitalization.

Mathematics

In 2nd Grade, students are exposed to real-life mathematical situations. A balanced approach to instruction provides students a foundation through hands-on activities, games, fact practice, and daily routines. A focus on problem solving enables students to achieve true proficiency as they use and share multiple strategies and explain their mathematical thinking. Repeated exposure to mathematical concepts and skills increases mastery.

Skills reinforced throughout the year include place value, addition and subtraction of whole numbers, and foundational skills for multiplication and division. Students also learn and apply their understanding of money, measurement, time, data and graphing, and geometry.

Social Studies

"My Community and Other Communities" is organized into five themes of study—Individual Development and Cultural Identity; Civic Ideals and Practices; Geography, Humans, and the

Environment; Time, Continuity, and Change; and Economic Systems. Students study their local community and learn about characteristics that define urban, suburban, and rural communities. Democratic principles and participation in government are introduced. Interaction with the environment and changes to the environment and their effects are examined. The concept of change over time and examining cause and effect are introduced. Students will examine the availability of resources and the interdependence within and across communities.

Units of Study for Grade 2: Our Community's Geography, Diversity Around the World, New York City over Time, Urban, Suburban, and Rural Communities, Community Economics

Science
Across the school year, second graders focus on the three domains of science: physical science, earth science and life science. The performance expectations in second grade help students formulate answers to questions such as:

- How does land change and what are some things that cause it to change?
- What are the different kinds of land and bodies of water?
- How are materials similar and different from one another, and how do the properties of the materials relate to their use?
- What do plants need to grow?
- How many types of living things live in a place?

Students are expected to develop an understanding of what plants need to grow and how plants depend on animals for seed dispersal and pollination. Students are also expected to compare the diversity of life in different habitats. An understanding of observable properties of materials is developed by students at this level through analysis and classification of different materials. Students are able to apply their understanding of the idea that wind and water can change the shape of the land to compare design solutions to slow or prevent such change. Students are able to use information and models to identify and represent the shapes and kinds of land and bodies of water in an area and where water is found on Earth.

The crosscutting concepts of patterns; cause and effect; energy and matter; structure and function; stability and change; and influence of engineering, technology, and science on society and the natural world are called out as organizing concepts for these disciplinary core ideas.

In the second grade performance expectations, students are expected to demonstrate grade appropriate proficiency in developing and using models, planning and carrying out investigations, analyzing and interpreting data, constructing explanations and designing solutions, engaging in argument from evidence, and obtaining, evaluating, and communicating information. Students are expected to use these practices to demonstrate understanding of the core ideas.

Units of Study for grade 2: Interdependence of Ecosystems, Structures and Properties of Matter, Earth's Systems: Processes that Shape the Earth

Mandarin
In 2nd Grade Mandarin, students review and build on previously learned material. Students continue to mimic what they hear and see in the language so they can eventually produce language independently. Students practice common types of interpersonal communication and basic classroom routines, using very simple phrases. New vocabulary and structures are also introduced and practiced in a variety of everyday, familiar contexts. Students are also introduced to simple

Chinese characters, with an emphasis on character recognition through reading. Proficiency-based performance tasks reinforce newly introduced content. By the end of the course, students will be able to copy sentence segments and word lists in writing basic characters, as well respond to basic familiar questions through speaking or mimicking words, lists or simple memorized phrases. Through learning language, students are also exposed to cultural celebrations from different Mandarin-speaking countries.

Spanish
In 2nd Grade, we review and build on previously learned material. Students practice common types of interpersonal communication and basic classroom routines, using very simple phrases. New vocabulary and structures are also introduced and practiced in a variety of everyday, familiar contexts. Proficiency-based performance tasks reinforce the newly introduced content. Through the interpretation of new French vocabulary and structures, the Spanish class explores a number of cultural topics from the Hispanic world. Students learn to be culturally sympathetic by studying different Spanish speaking countries and exploring the identities of Spanish speakers through songs, poems, expressions, projects, and lifestyles.

French
In 2nd Grade, we review and build on previously learned material. Students practice common types of interpersonal communication and basic classroom routines, using very simple phrases. New vocabulary and structures are also introduced and practiced in a variety of everyday, familiar contexts. Proficiency-based performance tasks reinforce the newly introduced. Through the interpretation of new French vocabulary and structures, the class explores a number of cultural topics from the Francophone world.

Visual Art
In 2nd Grade, students are encouraged to develop their ability to create and respond to meaning in visual imagery, to experiment and problem-solve, to express their own ideas and to reflect on their finished work and works in progress.

Our focus in 2nd Grade is Objects in Art. We start the semester by looking at and creating art in which objects are central in one way or another. We look at Hanna Hoch's collages and The Bicycle Wheel by Marcel Duchamp, Soup Cans by Andy Warhol, and the large-scale object sculptures by Oldenburg and Van Brugan. We make Dada-inspired collages by cutting up found images and mixing them up. We make large-scale sculptures of everyday objects and create our own series of soup can drawings.

We then look at artists who seem to abandon objects all together and focus on line or shape. We step into Jackson Pollock's boots and drip, drop, and splatter paint on a large canvas. We also make primary color grid collages after looking at Mondrian's work and create bold, wavy paper collages after looking at Matisse's paper cutouts.

Students will also create 3-dimensional inanimate objects from wood and clay.

Music
In 2nd Grade, students build on previous knowledge and continue to develop foundational musicianship skills. Students continue to develop vocal technique using solfège and repertoire in various languages. They also explore music from around the world through folk songs and dances. Participating in music from many cultures helps students deepen their understanding of how music is used around the world and how it connects to their lives.

Throughout the year, students continue to build music literacy skills, reading and composing both pitch and rhythm. This prepares students to read the five-line staff. Students strive to meet instrumental technique benchmarks on the barred instruments, percussion, and violin. Using melodies by Carl Orff and Gunild Keetman, students build their own arrangements and further develop their mallet technique. Students work together to create a fun ensemble experience with singing, dancing and creating their own rhythmic and melodic patterns. In their violin education, students continue to develop their posture and bow technique while adding the left hand finger position.

Physical Education
In 2nd Grade, students participate in both competitive and cooperative activities. Our curriculum offers a balance that allows each student to be successful throughout the school year. Through warm-up games and activities, students strengthen their spatial and body awareness, locomotive skills such as skipping, galloping, and running. Students will participate in a variety of team sport units, which include soccer, basketball, pillow polo hockey, kickball, and tennis. Students will be introduced to basic team sports concepts such as offense and defense. Our cooperative units include scooter games and bowling. The circus arts unit incorporates all of the above skills and introduces the beginning steps of juggling scarves, plate spinning, and using bucket stilts. The culmination of the school year is our Lower School Sports Day. On this day students compete in relay races and activities, displaying good sportsmanship and respect for classmates.

Swim
Students spend the first few weeks of school discussing the importance of water safety, which includes our pool rules and routines. Throughout the year students review skills learned previously and build upon those skills to enhance their stroke development. Each lesson allows for practice of these skills and the time to develop the endurance needed to be a capable swimmer.

The first stroke we break down into phases is the front crawl. Students work on mastering the flutter kick, working on technique, and endurance. We then break down the pull phase, teaching students to breathe to the side. Eventually, we combine both arms and legs to have a complete stroke. Students also learn backstroke and breaststroke in the same manner. As safety is always first, all students will end the school year learning how to tread water for an extended period of time.

Wonder Lab
The Wonder Lab is a space where our youngest learners begin their journey as makers, coders, and designers. Through playful inquiry, students explore foundational concepts in design thinking, robotics, and digital citizenship. Hands-on materials such as blocks, legos, the Duplo Wall, cardboard, recycled materials, and much more are used for creative projects and design challenges. Technology tools such as screen-free robots, circuit boards, and the Green Screen provide age-appropriate entry points for experimentation and digital literacy. Children are encouraged to ask questions, test their ideas, and collaborate with peers as they develop an early understanding of how technology and design can be used to solve problems. Each class engages in Wonder Lab once per week, with

additional opportunities to return for interdisciplinary projects co-taught with homeroom teachers and specialist partners.

Third Grade

Reading
In the workshop model, students begin the year by continuing to build a reading life at school and at home. Students practice daily reading routines such as strategies for selecting 'just-right' books, talking about reading with a partner, and writing about their reading. Through an exploration of fiction, students follow characters in stories to build theories and are exposed to various story elements. We read Realistic Fiction novels as part of our character study unit in which we investigate characters further, thinking about their behaviors, character traits, and motivations. Students read informational texts, learning about nonfiction text features as they gain information about an animal by researching and taking notes about the animal's habitat, appearance, diet, life cycle, adaptations, and fun facts. Diving deeply into a mystery unit, students learn to cite specific evidence from a text to help them collect clues and solve mysteries. The students take their reading skills across content areas to enter the activism unit in Social Studies. Students learn about stories of activism through different time periods and lenses. During the last reading unit, students choose an activist to learn about as part of their Personal Learning Projects.

Across all units, students continue to practice strategies such as making connections, predictions, and inferences, with an emphasis on interpretation. They show their comprehension by citing evidence from texts and supporting their conclusions through speaking and writing. While exploring a variety of genres and applying learned skills to all books they read, students work on reading fluently, reading with expression, and using context clues to find the meaning of unknown words. They also determine the main idea of a book and recount key details to identify the purpose of a text.

Writing
In the workshop model, students focus on qualities of good writing including ideas, organization, sentence fluency, conventions, voice, and word choice. They produce three modes of writing (narrative, informational, and opinion) throughout the year and practice these modes through a variety of writing projects. Students begin the year collecting ideas and writing pieces about a 'small moment' in their own lives with an emphasis on thoughts, feelings, and actions. Next, the students write informational pieces on a topic they are interested in or feel they know like an expert. Students partake in an in-depth research project that coincides with the science unit of study on animals. They learn how to identify important information in an article or book and paraphrase it into their own words.

Students write a persuasive piece about a topic they feel passionately about. They share their opinion by expressing their views on an issue or topic they care deeply about. Across all units, students generate ideas and focus on organizing their piece, so their writing is clear, coherent, and sequenced logically, while keeping the reader in mind. As growing authors, students work to connect their ideas using descriptive words, figurative language, and dialogue and actions to enhance meaning. They develop, organize, and strengthen their writing pieces by planning, revising, and editing. Students apply grammar rules to their sentences and paragraphs, using correct punctuation, capitalization, and spelling of high-frequency words. Students also learn and practice spelling rules and letter patterns. They become proofreaders as they take mental pictures of words and learn to identify misspelled words within their own writing. Students strive for accuracy and neatness when presenting their work.

Mathematics
Students explore mathematical concepts through a balanced program that is rich in real-world problem solving and hands-on learning opportunities. Addition and subtraction fact-knowledge is expanded to larger numbers. Multiplication and division are introduced as the children explore various strategies for solving problems. Students use their knowledge of patterns and functions to help them represent various rules for solving problems. Developing an understanding of the uses and representations of whole numbers, and parts of a whole, they compare and find equivalencies. Students collect, analyze, and draw conclusions about data. Basic concepts of probability are applied as students represent the likelihood of events in both words and fractions. Systems of measuring are examined as the children learn to measure accurately with various tools. Throughout every unit of study, students are challenged to not only solve problems, but to also understand why their strategies work and explain how they arrive at a solution.

During the year, skills are covered in a spiraling fashion, giving students the opportunity to demonstrate their mastery of new information on multiple occasions. Students use their knowledge of place-value to read, write, compare, and order whole numbers up to hundreds, and fractions, representing these numbers in a variety of ways. Through repeated practice, students build their automaticity with addition and subtraction facts through 20 and multiplication facts through 10 x 10. Various strategies, including estimation, are used to help children solve problems in all four operations. Students tell, write, and calculate elapsed time to the nearest minute. When comparing two- and three-dimensional figures, students use geometric terms to describe their observations. Students estimate and measure length and apply this information to calculate perimeter and area. Third-grade mathematical skills are continually reviewed so that as students demonstrate proficiency, they can then apply these skills to more challenging, critical-thinking tasks.

Social Studies
In “Communities around the World,” students learn about communities around the globe and about global citizenship. Students bring with them knowledge about their communities. In this course, students make comparisons across time and space, examining different communities and their cultures. Culture includes social organization, customs and traditions, language, arts and literature, religion, forms of government, and economic systems. Students learn about China, Nigeria, and Brazil as a study of different regions of the world, types of communities (urban, suburban, and rural), and governmental structures. The key ideas, conceptual understandings, and content specifications guide the study of communities while exploring the major themes of social studies. In the final unit of study, students are introduced to the concepts of prejudice, discrimination and human rights, as well as to social action.

Units of Study for Grade 3: Introduction to World Geography and World Communities, How Communities are Shaped: Spotlight on Nigeria, China, and Brazil, and Stories of Activism

Science
Across the school year, third graders focus on the three domains of science: physical science, earth science and life science.The performance expectations in third grade help students formulate answers to questions such as:

- What is typical weather in different parts of the world and during different times of the year?
- How can the impact of weather-related hazards be reduced?
- How do organisms vary in their traits?

- How are plants, animals, and environments of the past similar or different from current plants, animals, and environments?
- What happens to organisms when their environment changes?
- How do equal and unequal forces on an object affect the object?
- How can magnets be used?

Students are able to organize and use data to describe typical weather conditions expected during a particular season. By applying their understanding of weather-related hazards, students are able to make a claim about the merit of a design solution that reduces the impacts of such hazards. Students are expected to develop an understanding of the similarities and differences of organisms' life cycles. An understanding that organisms have different inherited traits, and that the environment can also affect the traits that an organism develops, is acquired by students at this level. In addition, students are able to construct an explanation using evidence for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing. Students are expected to develop an understanding of types of organisms that lived long ago and also about the nature of their environments. Third graders are expected to develop an understanding of the idea that when the environment changes some organisms survive and reproduce, some move to new locations, some move into the transformed environment, and some die. Students are able to determine the effects of balanced and unbalanced forces on the motion of an object and the cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other. They are then able to apply their understanding of magnetic interactions to define a simple design problem that can be solved with magnets.

The crosscutting concepts of patterns; cause and effect; scale, proportion, and quantity; systems and system models; interdependence of science, engineering, and technology; and influence of engineering, technology, and science on society and the natural world are called out as organizing concepts for these disciplinary core ideas.

In the third grade performance expectations, students are expected to demonstrate grade-appropriate proficiency in asking questions and defining problems; developing and using models, planning and carrying out investigations, analyzing and interpreting data, constructing explanations and designing solutions, engaging in argument from evidence, and obtaining, evaluating, and communicating information. Students are expected to use these practices to demonstrate understanding of the core ideas.

Units of Study for Grade 3: Interdependent Relationships in Ecosystems, Inheritance and Variation of Traits: Life Cycles and Traits, Weather and Climate, Forces and Interactions

Mandarin
In 3rd Grade Mandarin, students review and build on previously learned material. Students continue to mimic what they hear and see in the language and begin to take risks in producing language independently. New vocabulary and structures are also introduced and practiced in a variety of familiar contexts. Students begin to read and spell words in pinyin independently as another way to access the pronunciation and meaning of Chinese characters. They also begin to consistently interpret short and familiar Chinese characters through reading. Proficiency based performance tasks reinforce newly introduced content in all four language skills: listening, speaking, reading, and writing. Through learning language, students are also exposed to cultural celebrations from different Mandarin-speaking countries.

Spanish
In 3rd grade, students review and build on the content they have previously learned. Through practicing basic interpersonal communication, students learn to recognize and use high frequency structures to make descriptions, to express likes and dislikes, and to communicate in simple memorized sentences. During the course, students work on proficiency-based performance tasks related to the course content. Students are exposed to more of the main celebrations and cultural topics from the Hispanic world. Students learn to be culturally sympathetic by studying different Spanish speaking countries and exploring the identities of Spanish speakers through songs, poems, expressions, projects, and lifestyles.

French
In 3rd Grade, students review and build on the content they have previously learned. Through practicing basic interpersonal communication, students learn to recognize and use high frequency structures to make descriptions, to express likes and dislikes, and to communicate in simple memorized sentences. During the course, students work on proficiency-based performance tasks related to the course content. Students are exposed to more of the main celebrations and cultural topics from the Francophone world.

Visual Art
In 3rd Grade, students are encouraged to develop their ability to create and respond to meaning in visual imagery, to experiment and problem-solve, to express their own ideas and to reflect on their finished work and works in progress. Our focus in 3rd Grade centers around the question: “How do artists develop their technique?” We start the semester with a study of facial proportions and create a self-portrait. We will then be thinking about the human form and how it is represented in art. We will be investigating the ideas and emotions that form can express in works of art and how gestures can communicate. Students will explore a variety of artists, such as Amy Sherald, Frieda Kahlo, Naum Gabo, Kehinde Wiley, Chuck Close, and Kathe Kollwitz.

Students will create gestural ceramic sculptures. After learning the proper safety precautions and techniques, 3rd grade students will create kinetic portrait sculptures from wood.

Music
In 3rd Grade, students build on the skills and knowledge cultivated in previous years and continue to develop as musicians and instrumentalists. They are invited to take more ownership of their technical development; continuing to set goals and self-assess their progress. Students sing throughout each class and continue to build ensemble skills in preparation for their involvement in Band or Chorus during 4th Grade. Students begin singing in harmony with simple rounds and partner songs. This builds part independence and helps students work as an ensemble. They also strengthen their literacy skills, learning to read the five-line staff in treble clef. 3rd Graders continue to develop their folk dance technique, exploring dances with more challenging steps and learning about the origins of the folk music.

Throughout the year, students continue to develop their instrument technique. Building on their skills from the previous year, students continue to participate in barred instrument ensemble pieces. They have the chance to improvise, compose, and create performances involving several elements, such as singing, movement, and instruments. 3rd Grade students are also introduced to bucket drumming using the 5-gallon bucket as a central instrument. Students learn to use various rhythm patterns, repetition, and high/low tones to create a rhythmic groove. Bucket grooves can range in meter, tempo, and complexity as students continuously repeat one rhythm pattern. Students work on various rhythm exercises and grooves in duple and triple meters. Students continue to develop their

violin technique, working on posture, left hand position, bow hold, and string crossing. 3rd Graders also learn the melodica or recorder, providing them with their first woodwind instrument experience. These instruments build literacy skills and help them apply what they learned about reading the five-line staff.

Physical Education
Third Grade students participate in both competitive and cooperative activities. Our curriculum offers a balance that allows each student to be successful throughout the school year.
Through warm-up games and activities, students practice jogging and basic fitness concepts. Students will participate in a variety of team-sport units, including soccer, basketball, floor hockey, diamond games, and badminton. Students are introduced to positions for each team sport and how to play those positions. Our cooperative units include adventure and strategy games as well as fun fitness. The circus unit incorporates all the above skills and introduces students to beginning steps of juggling balls and spinning plates. The culmination of the school year is our Lower School Sports Day. On this day students compete in relay races and activities, displaying good sportsmanship and respect for classmates.

Swim
Students spend the first few weeks of school discussing the importance of water safety, which includes our pool rules and routines. Throughout the year students review skills learned previously and build upon those skills to enhance their stroke development. Each lesson allows for practice of these skills and the time to develop the endurance needed to be a capable swimmer.
Third Graders will review freestyle and backstroke and develop their breaststroke. Students will be introduced to learning open turns and flip turns. Our last unit of the year is games and activities, which includes relay racing and water polo.

Innovation Center
The Innovation Center builds upon early maker experiences, empowering students to take on more complex challenges in design, engineering, and digital media. Coupled with digital citizenship expectations of using technology tools safely and responsibly, students have access to age-appropriate robotics, coding platforms, 3D printers, and laser cutters, to develop critical thinking, perseverance, and collaboration skills. Projects often integrate core classroom learning, encouraging interdisciplinary connections across science, math, social studies, and the arts. Each class visits the Innovation Center weekly, with further experiences woven in through collaborative units that bring together classroom teachers and specialists.

Fourth Grade

Reading
The workshop model strives to continue developing students into avid and skilled readers. We begin with a review of the routines of the workshop model and previously learned comprehension strategies. Students also learn to identify and analyze literary elements, including plot, character, setting, problem and solution, and themes. Using realistic fiction chapter books, students are challenged to think deeply about characters—making inferences, building theories, and learning life lessons. During a study of nonfiction, students apply their knowledge of nonfiction features to extract information from expository and hybrid texts. When concentrating on narrative nonfiction, students highlight the main ideas and supporting details within a text. The culminating unit for the year is an exploration of historical fiction through the use of Book Clubs. Students collaborate with peers as they read a shared text and participate in daily discussions.

Exposure to a variety of genres throughout 4th Grade enables students to develop the reading skills they need to become independent readers. Students make meaning of literature by reading and comprehending grade-level texts with fluency and expression. As they read, students demonstrate their understanding by making connections and describing characters' traits, motivations, actions, and feelings. These details help to illuminate the theme of a text and how point of view affects the voice and context of each piece. Students are encouraged to use context clues to understand the meaning of unknown words. They also learn to use both explicit and implicit information from the text to make predictions and logical inferences. As increasingly sophisticated readers, students identify details from a passage to summarize a story and to answer questions about the text. When reading nonfiction, students describe the overall structure of a nonfiction text and determine whether the information they read consists of fact or opinion. Information is integrated from multiple texts on the same topic in order to write or speak about the subject knowledgeably.

Writing
The workshop model provides a framework in which students learn to develop longer narratives, essays, and an informational research piece. In the narrative realm, students publish a realistic fiction story. Students write a personal essay about a topic of interest from their lives and a persuasive essay on a more universal subject. In tandem with our nonfiction unit in reading, students apply their Social Studies knowledge and nonfiction skills to write an informational chapter book on one topic consisting of an introductory piece, an expository essay, a narrative piece, and a persuasive essay. Throughout the year, students create multi-paragraph writing pieces and edit them critically through the five-step writing process: idea generation, drafting, revising, editing, and publishing. Students engage in utilizing their knowledge of writing persuasive essays and transfer these skills to writing a literary essay. Students explore themes of picture books and write a five paragraph essay, convincing the reader as to why the life lesson of the picture book is important. Students also engage in learning vocabulary, spelling rules, sentence structure, parts of speech, punctuation, and capitalization.

The writing curriculum fosters the development of a variety of essential writing skills. As they practice the five-step process and produce written work, students learn how to generate topics for their compositions, as well as the ideas and details needed to craft them. Students learn to structure their writing with topic sentences, supporting details, conclusions, and logical sequences that include effective transitions between ideas, sentences, and paragraphs. They also learn to adjust the tone of their writing to match different genres, such as realistic fiction or memoir. In composing narratives, students use dialogue and description to bring their stories to life. In students' informative pieces, they generate thesis statements that are supported with reasons and evidence, and include facts, definitions, concrete details, quotations, and examples. To collect the material they need for a nonfiction piece, students learn how to gather relevant information from experiences and print or digital sources, and to take notes, categorize information, and provide a list of sources. Throughout the year, students come to an understanding that their writing benefits from planning, revision, and editing. As part of the editing process, they check spelling, punctuation, capitalization, and grammar, consulting references as needed.

Mathematics
The curriculum provides students with a balanced approach that is rich in real-world problem solving opportunities. The 4th Grade curriculum emphasizes content within five critical areas: place value and operations, multiplication and division strategies, fractions and decimals, geometry, and measurement and data collection. Students develop an understanding of the meanings, uses, and representations of numbers, finding commonalities of and differences among whole numbers,

fractions, decimals, and percentiles. Students review facts in addition, subtraction, multiplication, and division, as well as develop procedures and models for these operations. Analysis and interpretation of data is essential in selecting and creating appropriate graphical representations and applying basic concepts of probability. An exploration of customary and metric systems is conducted as students learn to measure length, weight, angles, area, and perimeter. Students investigate characteristics and properties of two- and three- dimensional geometric shapes and apply transformations and symmetry. As an understanding of patterns and functions is developed, students use algebraic notation to read, write, and solve number sentences and learn the properties of mathematical operations.

Fourth Graders are given numerous methods for skills practice and review, and are encouraged to explain and discuss their thinking in their own words. Students use their understanding of place value to read, write, and compare whole numbers and decimals. Additionally, they estimate and perform math operations on whole numbers, fractions, decimals, and percentiles. These concrete skills are further developed when solving word problems involving multiple operations: money, elapsed time, calendars, temperature, capacity, weight, and distance. As students analyze numerical quantities in various forms, they compare sizes, recognize patterns, and show alternative ways to solve problems. Students recognize size in customary and metric units, describe the relationships between units of measurement within the same system, and use appropriate units and tools of measurement. Geometric language is used when identifying, comparing, and creating lines, angles, and figures. As data is collected, students are expected to represent this information with a variety of charts and graphs and to analyze the data. Throughout all units of study, students formulate conclusions based on observation and mathematical judgment, and explain their thoughts and strategies to further develop their understanding of these concepts.

Social Studies

Grade 4 Social Studies is focused on New York State and local communities and their change over time, incorporating the study of geography, history, economics, and government. The course is divided into seven Key Ideas that span the State's history from before the European colonial era to the modern period. The Key Ideas are as follows:

- Identity: Who we are and where we come from
- Maps and the Geography of New York State
- America and New York
- Colonial New York and the Revolutionary War
- Constitution and Government
- Immigration, Migration and Westward expansion

The Key Ideas allow students to make connections to present-day New York State and the local community.

Science

Across the school year, fourth graders focus on the three domains of science: physical science, earth science and life science. The performance expectations in fourth grade help students formulate answers to questions such as:

- What are waves and what are some things they can do?
- How can water, ice, wind and vegetation change the land?
- What patterns of Earth's features can be determined with the use of maps?
- How do internal and external structures support the survival, growth, behavior, and reproduction of plants and animals?

- What is energy and how is it related to motion?
- How is energy transferred?
- How can energy be used to solve a problem?

Students are able to use a model of waves to describe patterns of waves in terms of amplitude and wavelength, and that waves can cause objects to move. Students are expected to develop understanding of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation. They apply their knowledge of natural Earth processes to generate and compare multiple solutions to reduce the impacts of such processes on humans. In order to describe patterns of Earth's features, students analyze and interpret data from maps. Fourth graders are expected to develop an understanding that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. By developing a model, they describe that an object can be seen when light reflected from its surface enters the eye. Students are able to use evidence to construct an explanation of the relationship between the speed of an object and the energy of that object. Students are expected to develop an understanding that energy can be transferred from place to place by sound, light, heat, and electric currents or from object to object through collisions. They apply their understanding of energy to design, test, and refine a device that converts energy from one form to another.

The crosscutting concepts of patterns; cause and effect; energy and matter; systems and system models; interdependence of science, engineering, and technology; and influence of engineering, technology, and science on society and the natural world are called out as organizing concepts for these disciplinary core ideas.

In the fourth grade performance expectations, students are expected to demonstrate grade-appropriate proficiency in asking questions, developing and using models, planning and carrying out investigations, analyzing and interpreting data, constructing explanations and designing solutions, engaging in argument from evidence, and obtaining, evaluating, and communicating information. Students are expected to use these practices to demonstrate understanding of the core ideas.

Units of Study for Grade 4: Structure, Function, and Information Processing, Waves: Waves and Information, Energy, Earth's Systems: Processes that Shape the Earth.

Mandarin

This course reviews and builds on previously acquired skills. Students begin to take risks creating with the language, while practicing listening, speaking, reading, and writing. In this course reading and writing become a new focus. Students learn to recognize and write more characters, and through differentiated proficiency-based performance tasks, students learn to interpret short paragraph-length passages through listening and reading and engage in presentational and interpersonal communication through writing and speaking. Building on their prior knowledge of pinyin, students are also introduced to typing in Mandarin using digital input tools, allowing them to apply their phonetic understanding in a new, practical way. Through learning language, students are also exposed to cultural celebrations from different Mandarin-speaking countries.

Spanish

This course reviews and builds on previously learned content and acquired skills. Through differentiated proficiency-based performance tasks, students begin to develop basic writing and speaking skills through reading and listening to meaningful and comprehensible language in a variety of everyday life contexts. Students learn to interpret short paragraph-length passages through

listening and reading and engage in presentational and interpersonal communication through listening comprehension, writing and speaking. Exploration of Hispanic cultural celebrations takes place throughout the course. Students learn to be culturally sympathetic by studying different Spanish speaking countries and exploring the identities of Spanish speakers through songs, celebrations, expressions, projects and lifestyles.

French
This course reviews and builds on previously learned content and acquired skills. Through differentiated proficiency-based performance tasks, students begin to develop basic writing and speaking skills through reading and listening to meaningful and comprehensible language in a variety of everyday life contexts. Students learn to interpret short paragraph-length passages through listening and reading and engage in presentational and interpersonal communication through writing and speaking. An exploration of Francophone cultural celebrations takes place throughout the course.

Visual Art
Students in 4th Grade are encouraged to develop their ability to create and respond to meaning in visual imagery, to experiment and problem-solve, to express their own ideas and to reflect on their finished work and works in progress. Students will have the opportunity to experiment with a wide variety of materials such as clay, wood, paint, film, and wire.

Our focus in 4th Grade centers around the question: “How do artists communicate?” We will be thinking about how art can be used to tell our stories or stories that are important to us. We start the semester exploring somewhat narrative works by artists such as Kerry James Marshall, William Kentridge, and Elizabeth Murray.

Music
In 4th Grade, students apply their knowledge from their previous musical experiences to new concepts and ideas through performance-based ensembles in either Band or Chorus. They develop their musical literacy, hone their musicianship skills, and work together to achieve the common goal of performing as an ensemble. Students explore and explain how our contributions as individuals help our community to excel as a whole.

Band
The 4th Grade Band serves as the introductory ensemble in our 4th - 12th Grade Band program. The Léman Manhattan Band program utilizes Concert Band instrumentation, and the instruments offered for instruction are: flute, oboe, clarinet, saxophone, trumpet, French horn, trombone, euphonium, or percussion. In addition to whole group ensemble instruction, each Band student will take a weekly lesson (choice of group lessons at no charge or private lessons for a fee) on their specific instrument.

In the 4th Grade Beginning Band, students learn how to assemble their instruments, how to utilize proper instrument carriage and hand placement, and how to produce a sound. During rehearsals and weekly lessons, students learn how to read written notation and learn instrument-specific skills. Ear-training, listening skills, ensemble skills, and a basic vocabulary of musical terms/symbols are also emphasized. Attention will be given to equipment care and maintenance, as well as effective practice habits. In addition to beginning level folk songs, rhythmic exercises, and the concert Bb scale, this class prepares level 0.5-1 Concert Band literature in a variety of genres. The performance component of the class involves participation in the winter and spring concerts.

Chorus
Lower School students begin their choral music experience in the 4th Grade. It is the beginning level ensemble in our 4th - 12th grade Chorus program. A primary focus of the class is developing healthy vocal technique. Students begin class each day with a physical warm-up and a variety of vocal warm-up exercises. They think critically about the ways that posture and breathing impact their singing. Students demonstrate the ability to maintain their own independent part while singing a variety of rounds and folk songs. They prepare for performances by matching intonation and diction, singing in unison, and singing in multiple parts as they rehearse a wide variety of elementary choral repertoire. They develop music literacy by reading, writing, and dictating tonal patterns, identifying notes on the staff, reading melodies, and describing different types of intervals. In addition, Chorus students work on developing ensemble skills and collaborate to create a productive work environment. The 4th Grade Chorus performs twice per year in the winter and spring concerts.

Physical Education
Fourth Grade students participate in both competitive and cooperative activities. Our curriculum offers a balance that allows each student to be successful throughout the school year.
Through warm-up games and activities, students practice jogging and basic fitness concepts. Students participate in a variety of team-sport units including soccer, basketball, floor hockey, diamond games, and badminton. During these units, students review the rules of the game, are reintroduced to positions and how to play them, and discuss offensive and defensive strategies. Students then participate in modified games that incorporate all of the skills they have learned. Fitness concepts are introduced and added to each unit so that they build upon previously taught skills, thus allowing students to make deeper connections between how their body works and the activities in class. Our cooperative units include scooter and adventure/strategy games. The circus unit incorporates all of the above skills and introduces students to beginning steps of juggling balls and spinning plates. The culmination of the school year is our Lower School Sports Day. On this day, students compete in relay races and activities, displaying good sportsmanship and respect for classmates.

Swim
The year begins with a quick review of pool safety rules and routines. Once in the pool, students review skills learned previously and build upon those skills to enhance their stroke development, endurance, and strength needed for all aspects of swimming. Each lesson allows for practice of these skills and the time to develop the endurance needed to be a capable swimmer.
Students participate in drill sets to help develop technique for freestyle, backstroke, and breaststroke. Lessons include pull buoys and kickboards to help strengthen both the pulling and kicking phases of each stroke. We emphasize the value of long, relaxed strokes as well as patterns and rhythms. We promote swimming not only as a competitive sport, but also as a lifetime sport. Fourth Graders love our junior lifeguard unit. Students learn the basics of being a junior lifeguard, which includes treading water, surface diving, stride and compact jumping, assessing a scene, performing a reaching assist, and most importantly, learning how to keep themselves safe while helping others. Our last unit of the year is games and activities, which includes relay racing and water polo.

Innovation Center
The Innovation Center builds upon early maker experiences, empowering students to take on more complex challenges in design, engineering, and digital media. Coupled with digital citizenship expectations of using technology tools safely and responsibly, students have access to age-appropriate robotics, coding platforms, 3D printers, and laser cutters, to develop critical thinking,

perseverance, and collaboration skills. Projects often integrate core classroom learning, encouraging interdisciplinary connections across science, math, social studies, and the arts. Each class visits the Innovation Center weekly, with further experiences woven in through collaborative units that bring together classroom teachers and specialists.

Fifth Grade

Reading
Once the students have reached 5th Grade, they are skilled at interpreting texts from a reader's point of view and have begun to simultaneously consider the author's point of view and impact on a text. The workshop model continues to build students' reading stamina while teaching them to move from concrete reading practices to more abstract analyses. The units of study expose them to a variety of fiction and informational genres while giving them the tools they need to navigate more complex structures and examine themes and point of view. Using the workshop model, students listen to a read aloud story that demonstrates comprehension strategies that they then apply to their independent reading lives. Extending their work in 4th Grade, students investigate the ways in which an author uses characters to convey universal themes. This character analysis then becomes a means for understanding the biographical subjects and perspectives in narrative nonfiction. In studying expository and hybrid nonfiction, students examine the different text structures authors use to convey ideas and how writers communicate main ideas and supporting details. Gathering in book clubs for an historical fiction unit, students collectively confront and discuss challenging themes presented in books during a historical time period, while analyzing how authors' perspectives affect style, structure, and other literary elements. Students then read and compare nonfiction text sets, using both articles and opinion pieces, about a debatable issue. During our fantasy unit, students dive into the world of fantasy, analyzing the use of symbols and the struggle between good and evil. At the conclusion of the year, students will use nonfiction texts to support their research in a Social Studies project.

As the children continue to develop as readers and their stamina builds, they learn to go beyond the concrete storyline and appreciate text on an increasingly abstract level. In their study of various genres, students develop the skills to comprehend increasingly complex texts and to recognize and contemplate the larger ideas communicated through literature. Students learn to summarize the main points of what they have read and use textual evidence to make logical predictions and insightful inferences. As they read, students are able to recognize the structure of a text and to understand the relationship of different parts of the text to each other and to the whole. They identify main ideas and are able to synthesize multiple ideas to arrive at original thought. In addition, students learn to describe the theme or the author's purpose and to cite supporting evidence in their explanations. They are also able to show how an author chooses information and employs a certain style and tone to serve his point of view. Students learn how an author uses specific reasons and evidence to support each idea in a text and precise words to create tone. When reading narratives, students pay special attention to how and why individuals, events, and ideas change. Students learn to compare and integrate information from multiple sources. Throughout the year, students continue to use decoding and context clues to read and understand unfamiliar words.

Writing
The workshop model aims to teach students to communicate their ideas in a variety of written forms. In all units of study, the students follow the writing process of idea generation, planning, drafting, revising, and editing. They begin the year by writing a personal narrative from another point of view, using descriptive and dramatic details, and now requiring the development of a theme. Turning their

focus to nonfiction, students choose a topic of interest to help them create a feature article. Building on their persuasive essay writing skills, students develop a research based argument essay on a topic of their choice. Students write a memoir about one event that happened to them at school during their time at the Lower School. Students use their research to help them write a research report on a topic in Social Studies.

In 5th Grade, students build on their experience writing narratives and research reports to produce more complex and varied compositions. In their narrative writing, students enhance their writing with rich details that enliven the story while also conveying point of view and theme. Research skills take a major role during the year, as students focus on expressing ideas that they support with evidence. In writing opinion pieces, they hone their ability to express a view in a thesis statement and support it with solid reasons and evidence. In addition to printed texts, students independently use technology to conduct research on the Internet. Seeking out multiple sources on a topic, they learn to assess the reliability of each one and work on taking effective notes. Then they either paraphrase or quote the information, always citing their sources. When planning and drafting, students learn to always keep their purpose and audience in mind. Finally, they strengthen the potency and clarity of their writing through revision and editing. They place particular emphasis on sentence fluency, word choice, grammar, punctuation, and spelling.

Mathematics
Throughout the year, students become fluent with formulas, algorithms, and problem-solving strategies through teamwork and self-exploration. The overarching themes of 5th Grade math include fluency with numbers and numeration, operations and computation, data, measurement, geometry, and foundations/pre-algebra. Students develop an understanding of formulas and algorithms to solve problems involving whole numbers, fractions, and decimals using the four operations. Measurement concepts involving data, capacity, area, volume, and coordinate systems, as well as geometry concepts, including finding surface area, perimeter, density, and volume are explored throughout the year. Students are introduced to the concepts of variables and equations.

Students are encouraged to apply a variety of strategies to solve problems as they practice problem-solving skills in independent, small group, and large group configurations. Throughout the course of study, students demonstrate their ability to read and write whole numbers and decimals, identify place value, and use expanded notation. Students also learn multiple strategies to multiply and divide whole numbers, decimals, and fractions. After developing an understanding of fractions, they begin to discover the relationships among fractions, percentiles, decimals, rates, and ratios. Using their knowledge of input and output tables, they solve equations with one variable. Students investigate geometric properties to describe, compare, and classify plane and solid figures and apply formulas to find surface area, circumference, area, and perimeter of shapes.

Social Studies
Grade 5 Social Studies is based on the history and geography of the Western Hemisphere, including the development of cultures and civilizations; interaction between societies; and the comparison of the government and economic systems of modern nations. The course is divided into seven Key Ideas that cover a time span from prehistory into modern times. The seven key ideas are:

- Early Peoples of the America
- Complex Societies & Civilizations
- European Exploration and Its Effects
- Geography in the Western Hemisphere
- Comparative Cultures

- Government
- Economics

Connections are studied throughout the course, especially in the examination of citizenship related to modern political and economic issues.

Units of study for Grade 5: Geography and Early Civilizations of the Western Hemisphere, European Exploration, Shaping a New Nation: How Immigration Shaped the United States, The Western Hemisphere Today

Science
Across the school year, fifth graders focus on the three domains of science: physical science, earth science and life science. The performance expectations in fifth grade help students formulate answers to questions such as:

- When matter changes, does its weight change?
- How much water can be found in different places on Earth?
- Can new substances be created by combining other substances?
- How does matter cycle through ecosystems?
- Where does the energy in food come from and what is it used for?
- How do lengths and directions of shadows or relative lengths of day and night change from day to day, and how does the appearance of some stars change in different seasons?

Students are able to describe that matter is made of particles too small to be seen through the development of a model. Students develop an understanding of the idea that regardless of the type of change that matter undergoes, the total weight of matter is conserved. Students determine whether the mixing of two or more substances results in new substances. Through the development of a model using an example, students are able to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. They describe and graph data to provide evidence about the distribution of water on Earth. Students develop an understanding of the idea that plants get the materials they need for growth chiefly from air and water. Using models, students can describe the movement of matter among plants, animals, decomposers, and the environment and that energy in animals' food was once energy from the sun. Students are expected to develop an understanding of patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.

The crosscutting concepts of patterns; cause and effect; scale, proportion, and quantity; energy and matter; and systems and systems models are called out as organizing concepts for these disciplinary core ideas.

In the fifth grade performance expectations, students are expected to demonstrate grade-appropriate proficiency in developing and using models, planning and carrying out investigations, analyzing and interpreting data, using mathematics and computational thinking, engaging in argument from evidence, and obtaining, evaluating, and communicating information; and to use these practices to demonstrate understanding of the core ideas.

Units of Study for Grade 5: Structures and Properties of Matter, Earth's Systems, Matter and Energy in Organisms and Ecosystems, Space Systems: Stars and the Solar System

Mandarin
The main focus of this year is on developing confidence in communicative skills for students, while helping them to advance their reading and writing. Students should feel more comfortable speaking in the target language. As a class, we work on reading and constructing dialogues; interactions and conversations between classmates are encouraged and are part of the classroom experience. Students in 5th Grade think critically comparing customs and mannerisms between the United States and Mandarin-speaking places, as more cultural mannerisms are presented. Students also practice decoding a wider range of words and comprehending longer texts by using contextual and textual clues. They complete reading and writing assignments with increasing independence and develop confidence in producing work using both handwriting and typing skills.

Spanish
Students begin the semester reviewing previous themes and basic verbs and begin to conjugate regular and irregular verbs more accurately while continuing to develop confidence in communication skills and reading comprehension. As students become more familiar with interpreting high frequency structures and vocabulary in various familiar contexts, they develop the skills to consistently write and speak in complete simple sentences. Students continue to regularly practice proficiency-based performance tasks in order to enhance their proficiency in listening, speaking, reading, and writing. Through language study, students also learn about the products, practices, and perspectives of Hispanic countries. In this course, students begin to learn how to use and maintain reference resources and technology tools that help them to be successful in their Spanish studies. Students learn to be culturally sympathetic by studying different Spanish speaking countries and exploring the identities of Spanish speakers through songs, poems, expressions, projects and lifestyles.

French
In this course, students review and build on previously learned material. Students begin to conjugate regular and irregular verbs more accurately and continue to develop confidence in communication skills. Students are encouraged to take risks in the language so that they may begin to express themselves freely and easily. As students become more familiar with the particular structures, expressions, and vocabulary in various types of conversation, they develop more complex writing and verbal skills to reinforce their communication abilities. Interacting with a partner and participating in a variety of activities in French is the basis for each class meeting. Students also learn about the culture, food, and traditions of people in Francophone-speaking countries using the Internet and by watching interactive-learning series.

Visual Art
Students in 5th Grade Art are encouraged to develop their ability to create and respond to meaning in visual imagery, to experiment and problem-solve, to express their own ideas and to reflect on their finished work and works in progress.

Our focus in 5th Grade centers around the questions, “what do I stand for?” and “How does art relate to community?” The year begins with contemplating identity and artist voice. Students explore works by artists such as Glenn Ligon, and Barbara Kruger. When thinking about community, we explore the quilts of Gee’s Bend, and mural works by Diego Rivera, Keith Herring, and Swoon.

Each year the 5th Graders are inspired in different ways and students work out methods to spread art throughout the public spaces of Léman Manhattan. Past projects have included a Matisse inspired paper cut-out mural and hidden sculptures throughout the building.

Music
Our 5th Grade musicians continue to progress in either Band or Chorus class. Within these ensembles, the students work to refine their musical literacy, musicianship skills, and collaborative skills in preparation for their continued studies in Upper School Music.

Band
While most students in the 5th Grade Band will be second-year players, new students with no experience are also welcome. With differentiated instruction and a commitment to practicing, beginners can be very successful in the 5th Grade Band. Instruments offered for instruction are: flute, oboe, clarinet, saxophone, trumpet, French horn, trombone, euphonium, and percussion. This course encompasses ensemble rehearsals as well as weekly group (no charge) or private (for a fee) lessons. In this class, students review and reinforce prior musical knowledge and technique through familiar tunes and basic sight-reading. They learn new rhythmic ideas and notes through new scales including Eb Major, and F Major in different patterns. Band members also learn basic conducting patterns in 4/4 time, the terms “up-beat” and “down-beat” in relation to conducting, and the ensemble skill of following the conductor. Greater attention is given to teaching techniques for demonstrating the spectrum of dynamics in musical repertoire. The students in this class are able to distinguish between melody, harmony, and bass line, and define the role each part plays in music. Fifth Grade Band students also begin to identify tuning problems and their solutions, and discuss how tuning is related to harmony in music. They learn and define different musical styles in preparation for challenging new repertoire. The 5th Grade Band studies and performs level 1–1.5 concert band literature and performs at least twice per year.

Chorus
Students continue to develop their vocal range utilizing healthy vocal techniques from their previous year of training. However, new students are welcome in this class regardless of prior choral music experience. With differentiated instruction, beginners can be very successful. In 5th Grade Chorus, students learn new physical warm-ups and more complex vocal warm-up exercises. They strengthen their aural skills by critically assessing their vocal performance as a group and identifying areas for improvement. Students demonstrate the ability to maintain their own independent part while singing in 2-part harmony. They continue to develop the ability to sight sing, expanding to exercises involving five pitches. Students also develop their performance skills, singing with expression, dynamics, and confidence.

Physical Education
Fifth Grade students participate in both competitive and cooperative activities. Our curriculum offers a balance that allows each student to be successful throughout the school year.
Warm-up games and activities allow students to work on basic fitness concepts, both individually or in a small-group setting. Students participate in a variety of team-sport units, which include soccer, basketball, floor hockey, diamond games, and badminton. During these units, students review the rules of the game and discuss offensive and defensive strategies. Students are reintroduced to positions for each team sport and how to play those positions. Students then participate in modified games that incorporate all of the skills they have learned. Fifth Graders also participate in an extensive fitness unit that promotes strength and endurance. Basic fitness concepts are introduced throughout the unit, including taking and monitoring your heart rate through and after an activity. Our cooperative units include scooter and adventure/strategy games. The circus unit incorporates eye-hand coordination, balance, and manipulation. Students practice juggling balls, manipulating devil sticks and spinning plates. The culmination of the school year is our Lower School Sports Day.

On this day, students compete in relay races and activities, displaying good sportsmanship and respect for classmates.

Swim
The year begins with a quick review of pool safety rules and routines. Once in the pool, students review skills learned previously and build upon those skills to enhance their stroke development, endurance and strength needed for lap swimming. Each lesson allows for practice of these skills and the time to develop the endurance needed to be a capable swimmer.

Each class lesson includes elements of distance and drill work that helps improve coordination and strength. Students participate in drill sets to help develop technique. Lessons include pull buoys and kickboards to help strengthen both the pulling and kicking phases of each stroke. Students learn three of the four competitive swim strokes in the same manner. We emphasize the value of long, relaxed strokes as well as patterns and rhythms. Swimming is promoted as a competitive sport and a lifetime activity.

Fifth Graders love our junior lifeguarding unit. Students learn the basics of being a junior lifeguard which includes treading water, surface diving, stride and compact jumping, assessing a scene, performing a reaching assist, and most importantly, learning how to keep themselves safe while helping others. Our last unit of the year is games and activities, which includes relay racing and water polo.

Innovation Center
The Innovation Center builds upon early maker experiences, empowering students to take on more complex challenges in design, engineering, and digital media. Coupled with digital citizenship expectations of using technology tools safely and responsibly, students have access to age-appropriate robotics, coding platforms, 3D printers, and laser cutters, to develop critical thinking, perseverance, and collaboration skills. Projects often integrate core classroom learning, encouraging interdisciplinary connections across science, math, social studies, and the arts. Each class visits the Innovation Center weekly, with further experiences woven in through collaborative units that bring together classroom teachers and specialists.