



Star Academy Middle School Guide 2021 - 2022 PROGRAM AND SCHEDULE

Capture Curiosity. Develop Potential.

Our Philosophy

The best for you & your growing child

Our goal is to maximize your children's academic opportunities during school time, so that families can have their evenings and weekends free to enjoy being together.

The Directors of Star Academy have the child's interests in mind, and also value the interests of the parents. Our extensive school curriculum exposes the children to many different spheres of knowledge and experiential learning during the daytime -- prime time for learning. As a result, many extraneous after school activities become unnecessary. However for those still looking for additional electives, the after school program has ample offerings all under one roof. Thus, we take away the burden of shuffling schedules, circuitous driving, and no family time or weekend time to yourselves.

Mission Statement

The Star Academy's primary objective is to capture a child's natural curiosity and to develop his/her potential as a lifelong learner. Our educational goals are based on our thoughtfully planned recognition of what the parents need for their children and what children need to succeed.

Our Philosophy

Each child carries tremendous potential within. Our goal at Star Academy is to gently lead each child to realize their innate potential at the highest degree. We teach children to problem solve, develop their social skills, and to steer their natural curiosity toward true knowledge.

We strive to accomplish this through:

- Adjustable lesson plans based on weekly teacher feedback
- Selecting superior faculty members
- Keeping small class sizes and teaching core subjects in subgroups, by levels
- Collaborating with the families and students to create an optimal plan for each child
- Balancing each day to minimize stress and maximize learning experiences
- Creating a pleasant environment and positive morale for the children and faculty

Academic Schedule

Star Academy's Middle School academic schedule has three trimesters: Trimester 1 (also called the Fall semester), Trimester 2 (Winter), and Trimester 3 (Spring). Each trimester includes the same classes and faculty members throughout the year. Topics within those classes will evolve as needed to fulfill the entirety of our substantial curriculum.

Star Academy's Middle School consists of grades 6, 7, and 8. We have included 5th Grade briefly in the curriculum information here to show where they are coming out of Star Academy Elementary School learning.

All Middle School students take English, Math, Science, Social Studies, Technology, and a World Language. All students also have a variety of visual or performing arts, health, physical education, and computer courses. In addition, our academic schedule contains a broad spectrum of afterschool activities including: community time, clubs and organizations, private tutoring, performing arts ensembles, sports, and study halls.

Middle School students are asked to make some choices each year regarding arts and other electives.

At the end of the academic year, all Middle School students will lead a conference with their parents/guardians and school administration. In line with the school's commitment to student-centered learning, they will share evidence from their yearlong portfolio of work and reflect on their evolving understanding of themselves as learners and members of the Star Academy community.

Star Academy General Curriculum

Grade Five

Grade Five students add health and additional technology courses to our traditional Star Academy curriculum. need to choose a language and a performing arts ensemble (orchestra or chorus). In Grade Five Reading, Writing, Math, Arts, and Physical Education meet every day during the week. Social Studies, Science, various arts, technology courses, and World Languages meet on alternating days. Russian language is three days per week while their language elective, Spanish, meets twice per week. Physical education consists of: Karate, Gymnastics, and Dance. Art consists of: Visual Arts, Music, and Theatre. Technology consists of: Typing, Computer Science, Robotics, Engineering, Coding, and more. Health includes: Home economics, Anti-Bullying Seminar, and Physical Health/ Changing Bodies.

Grade Six

In addition to Grade Five curriculum, Grade Six adds: Choice of World Language (kept through Grade Eight), additional Technology classes, Performing Arts Ensemble (Chorus or Orchestra).

Sixth graders are the adults of childhood, just beginning to come into a sense of themselves in the larger world. Therefore, our curriculum focuses on cultivating the attitudes and aptitudes needed to become active, compassionate, and clear thinking community members. We strive to maintain a safe and supportive environment that encourages and enables students to take risks and become independent learners while also developing their competence in necessary skills – organization, note taking, outlining, studying, computing, writing, and speaking. We also empower students to engage mindfulness practices as they take on academic and social challenges. We offer students opportunities for solitary thought and for interactive activities in all subject areas, and we attempt to spark their natural curiosity and enthusiasm for the world of ideas. Star Academy's motto is "Capture Curiosity. Develop Potential." The sixth grade curriculum pursues the concepts of power and freedom throughout the year as we delve into our integrated STEM and Humanities curricula.

Grade Seven

Grade Seven students continue with their curriculum above while also adding Computer Science curriculum. Grade Seven students continue their Performing Arts Ensemble, and World Language chosen in Grade Six.

The seventh grade program maintains the school's commitment to hands-on, experiential education and the acquisition of important skills through genuinely interesting and relevant topics. As we say in our Star Academy mission statement, "The Star Academy's primary objective is to capture a child's natural curiosity and to develop his/her potential as a lifelong learner. Our educational goals are based on our thoughtfully planned recognition of what the parents need for their children and what children need to succeed."

Grade Eight

All Grade Eight students alternate STEM Studio classes and they add Health & Wellness to their weekly schedule to continue talking about their changing bodies. Grade Eight students continue their Performing Arts Ensemble, and World Language that they chose in Grade Six.

The eighth grade program maintains the school's commitment to hands-on, experiential education and the acquisition of important skills through genuinely interesting and relevant topics. As we say in our Star Academy mission statement, "The Star Academy's primary objective is to capture a child's natural curiosity and to develop his/her potential as a lifelong learner. Our educational goals are based on our thoughtfully planned recognition of what the parents need for their children and what children need to succeed."

The pages that follow contain detailed descriptions of each department's courses and program.

English Language Arts: Reading & Writing

Grade Five

Strong reading, writing, and thinking skills are the focus of this course. Literature-based units are designed to help students make connections between texts and to think about the layers of meaning in complex stories. By using active reading strategies, students respond to literature and develop reading comprehension, interpretation, and analysis skills. Writing skills are developed through work in a variety of expository and creative forms. In responding to literature, students practice writing strong paragraphs and supporting opinions with specific details. Many creative writing opportunities, including a novel-writing and poetry unit, allow students to follow the steps of the writing process. Technology is a tool that students will use to communicate, collaborate, and create while developing their critical thinking skills.

Grade Five Class Book Guided Reading Seminar

Book Title	AR Level	Grade
Witch of Blackbird Pond	5.7	5
Island of the Blue Dolphins	5.4	5
The Giver	5.7	5
Big Wave	5.2	5
House of Dies Drear	4.8	5
My Brother Sam Is Dead	4.9	5
My Side of the Mountain	5.2	5
Missing May	5.3	5
Escape from Warsaw	5.5	5
Anne Frank: The Diary of a Young Girl	6.5	5

Grade Six

This course focuses on building reading, writing, and critical thinking skills through carefully chosen texts and writing projects. In our comparative mythology unit, students also develop technology, research, and presentation skills as they work together to understand how myth reflects a culture's values and how different cultures' myths compare with one another. Literature units on fantasy, mythology, and multicultural fiction allow students to deepen their understanding of character, theme, plot, and setting. A poetry unit reinforces close reading and creative writing skills. Narratives, dialogues, analytical paragraphs, short essays, and reflective writing are also woven into the curriculum. Large and small group discussions enable students to develop their ideas and to practice expressing them. Throughout each unit, students practice revising, editing, and proofreading their work.

In the sixth grade English curriculum, we foster an appreciation for the power of language as a tool for conveying information, communicating ideas, and capturing experiences. We begin with the idea that humanity has a rich and diverse tradition of storytelling. Through this lens, we seek out mentor texts from fiction and nonfiction genres to help us construct an understanding of, and appreciation for, the techniques used by master writers to effectively tell their stories. Drawing on these examples, students build a dynamic knowledge of literary elements, grammatical concepts, and rhetorical devices that inform their engagement with reading as well as their approach to their own writing. Throughout this exploration, students develop their abilities as readers, writers, critical thinkers, collaborators, and oral communicators as they tackle a wide range of projects and challenges.

Reading

The study of literature is at the heart of the English program, which includes poetry, novels, and nonfiction selections. Students develop critical reading, summarizing, and synthesizing skills through text based writing assignments, class discussion, and creative projects. Their growing body of knowledge about effective writing becomes the keystone in their development as writers. Independent reading is encouraged through a monthly Genre Celebration and end of year "Shelfie" project, in which students acknowledge their achievements as readers over the course of the year by photographing their collection of independent reading choices. The overarching goal of the English curriculum is for students to come to recognize the power of narrative as a tool of self expression and cross cultural understanding.

Skills

- Identify main idea in fiction and informational texts
- Summarize using main idea and supporting details
- Make inferences based on textual clues
- Identify and analyze characteristics of various genres
- Use active reading strategies to monitor comprehension Literary Analysis
- Identify and understand theme and major literary elements (Figurative language; story structure; point of view; foreshadowing; characterization)
- Identify and analyze techniques and efficacy in authors' styles
- Support analysis with textual evidence
- Identify and articulate personal responses to content and style in a variety of texts Reading Habits
- Select appropriate text for independent reading
- Read wide and varied materials and genres
- Self Monitor for multiple layers of textual comprehension

Writing

The sixth grade writing program works hand-in-hand with our reading program to address the fundamental components of effective writing. As students read and analyze writing from a variety of genres, they identify skills and strategies that further their own writing abilities. Students strengthen their skills through free writing, poetry, creative work, summaries, persuasive essays, and analytical pieces. As writers, they are encouraged to write from their hearts as well as their heads, balancing the passion of their voices with the precision of their ideas. Conventions (i.e. spelling, grammatical conventions, and mechanics) are introduced and reinforced during discussions of mentor texts as well as in discrete skill exercises, and are incorporated into all writing assignments that require a final draft.

Skills

- Independently use the writing process to brainstorm, draft, revise, and edit effectively
- Develop strong analytical writing skills
 - State information and ideas clearly
 - Organize topic sentences, supporting details, and concluding sentences effectively
- Strengthen creative writing skills
 - Develop setting, tone, character, and plot
 - Use descriptive and figurative language effectively
 - Relate personal experience to ideas and develop ability to express ideas and emotions thoroughly through writing Conventions (Grammar and Mechanics in service of stronger writing)
- Apply spelling and punctuation skills
- Identify and correct common grammatical errors, especially in the areas of sentence structure, dialogue, parts of speech, verb tense agreement, and subject/verb agreement
- Apply knowledge of grammatical structures to improve sentence fluency

Grade Six Class Book Guided Reading Seminar

Book Title	AR Level	Grade
Bridge to Terabithia	4.6	6
Bud Not Buddy	5.0	6
The Watsons Go To Birmingham	5.0	6
A Night Divided	5.4	6
Foster's War	5.9	6
Johnny Tremain	5.9	6
The Secret Garden	6.3	6
Across Five Aprils	6.6	6
Phantom Tollbooth	6.7	6
Alexander Hamilton	7.4	6
Before Columbus	8.1	6
Devil's Arithmetic	4.6	6
Echo by Pam Ryan	4.9	6

Grade Seven

Students work on reading accurately and in depth by studying a variety of genres in this course. They learn terms of literary analysis and explore how plot, characters, and themes develop. Students also learn to take useful and concise notes as they read. Written assignments focus on developing an effective writing process and include analytical paragraphs, short essays, and short stories. There is also regular grammar study focusing on parts of speech and functions of the noun. Works may include a collection of short stories, the play *The Miracle Worker*, and the novel *To Kill a Mockingbird*. A unit on the graphic novel *The Arrival* focuses on visual analysis and includes a research project on immigration.

The 7th and 8th English curriculum emphasizes principles of communication: listening, writing, reading, and speaking. The writing focus is centered on refining one's thinking, exploring ideas, and communicating clearly and concisely.

Literature

Students study short stories, fiction, nonfiction, and poetry. They learn to interpret and analyze literature with an emphasis on close reading and textual analysis of the elements of literature, character development, and symbolic and figurative language. One goal is to coach students to read deeply in order to simultaneously appreciate and analyze good literature. As this becomes second nature, students come to appreciate the many levels of meaning contained in complex texts. Novels read in 7th and 8th grade include: *Of Mice and Men*, *Animal Farm*, *Raisin in the Sun*, *Shabanu*, *The Misfits*, *Totally Joe*, *To Kill a Mockingbird*, *Julius Caesar*, *The House on Mango Street*, and *The Absolutely True Diary of a PartTime Indian*.

Skills

- Improve reading comprehension
 - Literal comprehension:
 - Find the main idea
 - Read for detail and sequence
 - Inferential comprehension:
 - Understand character development as well as the more subtle nuances and dualities that may be contained within a character
 - Identify cause and effect

■ Predict outcome

- Improve fluency when reading aloud and speed in silent reading
- Substantiate one's conclusions and assertions by utilizing evidence from the text
- Determine and unravel the author's intended meanings in symbolic language
- Distinguish fact from opinion
- Identify false generalizations
- Analyze
- Identify and use literary devices:
 - Characterization, plot, setting, point of view, tone, style
 - Multiple layers of meaning in figurative/metaphorical language
- Find meanings and uses of words encountered daily in conversations and in all reading

Writing

The goals of the writing program include writing with clarity, precision, and cohesion. Over the course of two years, students write analytical essays, fiction, nonfiction, poetry, and two research reports that are integrated into the social studies curriculum. Emphasis is placed on using specific structures to organize and clarify ideas while writing descriptive, expository, and narrative pieces. Students will be taught the skills of generating ideas, organizing material, revising, and presenting formal writing.

Skills

- Establish and maintain a formal writing style
- Draft, revise, edit
- Demonstrate proficiency in persuasive, narrative, expository, and descriptive writing
- Use precise words and phrases, including transitions, both inter and intra paragraphs
- Formulate compound, complex, and compound complex sentences

Grammar

Grammar rules are introduced in mini lessons and reinforced in writing assignments. Students are accountable for incorporating grammar rules into all of their writing. Participles, direct objects, indirect objects, complements, transitive and intransitive verbs, predicate nominatives, and predicate adjectives are covered.

Mechanics

Skills

- Punctuation
- Grammar
 - Adjectival, adverbial, and noun clauses; participial, gerund, and appositive phrases; direct and indirect objects; complements

Vocabulary

Seventh and eighth grade study Greek and Latin word roots, suffixes and prefixes

Grade Seven Class Book Guided Reading Seminar

Book Title	AR Level	Grade
Lord of the Flies	5.0	7
Out of the Dust	5.3	7
The Pigman	5.5	7
War Horse	5.9	7

Within Reach: My Everest Story	6.0	7
Titanic Young Survivors	6.5	7
I Know Why the Caged Bird Sings	6.7	7
Children of the Dust Bowl	6.8	7
At Her Majesty's Request	7.1	7
Little Women	7.9	7
Of Mice & Men	4.5	7
Outsiders	4.7	7
Code of Honor	4.7	7
Grapes of Wrath	4.9	7

Grade Eight

In this course, students study *To Kill A Mockingbird*, *A Separate Peace*, a variety of poems, as well as a Shakespeare play, which they will perform. They develop analytical skills through close reading of these texts and through visual analysis during our media literacy unit. During frequent writing assignments, students develop their ability to structure paragraphs and longer pieces, to write thesis and topic sentences, and to incorporate evidence. There is continued emphasis on the writing process, including brainstorming, outlining, and revising. Grade Eight students also study creative and personal writing and complete a research project. Grammar study continues with a review of parts of speech and functions of the noun and an introduction to dependent clauses.

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Literature

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 - Identify cause and effect
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- Improve fluency when reading aloud and speed in silent reading
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- Distinguish fact from opinion
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- Identify and use literary devices:
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Skills

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Vocabulary

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Class Book Guided Reading Seminar

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Witness	5.0	8
Adventures of Ulysses	5.2	8
Fahrenheit 451	5.2	8
Blood on the river	5.3	8
To Kill a Mockingbird	5.6	8
Slaughterhouse 5	6.0	8
A Separate Peace	6.9	8
I Am Malala	7.1	8

Animal Farm	7.3	8
Bury My Heart at Wounded Knee	7.9	8
Great Expectations	9.2	8
strange case of dr. jekyll and mr. hyde	9.5	8
Hidden Figures	9.7	8
Frankenstein	12.4	8

MATHEMATICS

All students in Grade Five through Grade Eight have Math in homogeneously mixed groups. As always mathematics and all skills at Star Academy are taught to the students in the room, not based on the textbooks descriptions of when and how a student should learn the information. When the student is ready, the information will be taught to them regardless of grade level.

Grade Five: We will finish traditional Grade 6 Math on Standard Track and Level 7/ Pre-Algebra on Fast Track

Students study arithmetic using whole numbers, fractions, and decimals to understand concepts and strengthen skills. Manipulatives are used to help illustrate some concepts. Other topics include measurement, geometry, and estimation. Mental and written computation is emphasized, but calculators or computers are used for appropriate activities. Students work individually as well as in groups when appropriate. Throughout the year, students move away from rote arithmetic to applications and problem solving. Learning how to apply skills, both in and out of the context in which they were taught, provides students with a deeper understanding of how and why they will use mathematics as a valuable tool in their lives. The Math mammoth program of study.

Topics for Grade 6 Level Math Include (But Are Not Limited To)

The Number System

- Recognizing how negative and positive numbers can be used to indicate quantities in opposite directions
- Understanding the absolute value of rational numbers
- Identifying and showing negative values graphically
- Graphing ordered pairs on the 4 quadrants of the coordinate system
- Finding greatest common factors (up to 100)
- Finding least common multiples (for numbers to 12)
- Using distributive property to rewrite expressions
- Dividing fractions by fractions to solve word problems
- Dividing multi digit numbers with fluency
- Using the four operations fluently with multi digit decimals

Expressions & Equations

- Evaluating numeric expressions that include exponents
- Reading, writing, and evaluating expressions that include numbers and letters
- Generating equivalent expressions by using the properties of operations
- Recognize two equivalent expressions
- Recognizing that equations and inequalities can be solved by finding the value or set of values that make them true
- Writing expressions to solve real world problems using variables in place of unknown numbers
- Writing and solving equations to solve real world problems
- Writing inequalities given specified conditions in real world problems

- Writing equations that include both dependent and independent variables and examining the relationship between these two variables using graphs and tables

Geometry

- Finding the area of triangles and other polygons and doing so to solve real world problems
- Finding the volume of a rectangular cuboids
- Drawing polygons by plotting their vertices on the coordinate system and determining the length of horizontal and vertical sides
- Finding the surface area of 3D shapes using nets of rectangles and triangles

Ratios & Proportional Relationships

- Using the concept of ratio to show the relationship between two quantities
- Using ratios to determine unit rates
- Solving real world problems using ratio and rate including by the use of equivalent ratios and by understanding and using the concept of percentages

Statistics & Probability

- Distinguishing questions that are statistical from those that are not based on whether they anticipate variability
- Recognizing that data gathered in response to a statistical question can be described by its center, its range, and it's shape
- Understanding that, for numeric data, a measure of center is a single number that is a summary of all values

unlike a measure of variation, which is a single number that describes how the values vary

- Displaying numeric data on histograms, dot plots, and box plots
- Summarizing sets of numeric data including the numbers, nature, units of measurement, appropriate measures of center (mean/median, mode) and of variability

Skills

- Create a model
- Guess and check
- Make a table
- Work with a simplified case
- Find a pattern
- Use simpler numbers

Pre-Algebra

PreAlgebra prepares seventh grade students for the more intensive Algebra I course they will encounter in eighth grade. Students continue to expand the breadth and depth of their mathematical knowledge base and generalize previously learned arithmetic skills using algebra. Each class begins with a Problem of the Day, which strengthens students' critical thinking and reviews computational and conceptual skills. Calculators and Chromebooks are routinely incorporated into lessons, allowing students to become comfortable with the technology in future math courses and in the workforce. Students regularly communicate their thinking in solution writeups, oral explanations of problems, and collaborative group activities. All students have the opportunity to participate in Mathcounts, an extracurricular club that provides additional challenges to motivate students.

Pre-Algebra

- Introduce and develop the concept of a variable
- Define and graph functions
- Recognize dependent and independent variables in a function
- Simplify and evaluate variable expressions
- Apply the distributive property
- Solve equations in one variable

Numeration

- Study concept and properties of integers
- Master all four operations with integers
- Review prime and composite numbers
- Apply prime factorization, greatest common factor, least common multiple to algebraic expressions
- Learn scientific notation
- Compute numerical expressions with exponents
- Master order of operations
- Explore concept of negative exponents
- Compute absolute value

Decimals

- Review place value and ordering of decimals
- Review all operations with decimals

- Note taking skills
- Explaining steps in a sequential and efficient manner

Mathematical Practices

(from Common Core State Standards)

1. Make sense of problems and persevere in solving them
2. Reason abstractly and quantitatively
3. Construct viable arguments and critique the reasoning of others
4. Model with mathematics
5. Use appropriate tools strategically
6. Attend to precision
7. Look for and make use of structure
8. Look for and express regularity in repeated reasoning

- Solve word problems in one variable
- Apply exponents to algebraic expressions
- Introduce simple operations with monomials
- Solve and graph linear equations
- Translate real life situations to linear equations
- Recognize that slope is synonymous with rate of change
- Discover properties and patterns using calculator
- Estimate sums, differences, products, quotients
- Solve word problems

Fractions

- Simplify fractions, both numerical and algebraic
- Review all operations and extend to algebraic fractions

Ratio, Proportion, Percent

- Review concepts of ratio and proportion
- Solve word problems involving proportion
- Master fraction, decimal, and percent equivalents
- Understand percent as proportion
- Solve problems using percent

Graphs and Displays of Data

- Create broken line and circle graphs, histograms, stem and leaf plots, and scatter plots
- Interpret broken line and circle graphs, histograms, stem and leaf plots, and scatter plots
- Recognize the origin, axes, and four quadrants of the coordinate plane
- Graph points on a coordinate plane
- Define and master concept of functions
- Analyze functions as they relate to change (slope = rate of change, intercept = starting point)
- Introduce slope intercept form of linear equations
- Graph linear equations on a coordinate plane
- Collect data and create spreadsheets using Microsoft Excel

Probability and Statistics

- Find simple probability of an event
- Find probability of independent events both occurring
- Find probability of dependent events both occurring
- Create frequency tables
- Use Counting Principle and permutations formulas
- Learn to calculate combinations
- Find range, mode, mean, and median of data

Grade Six: We will complete level Pre-Algebra on standard track and Algebra 1 on Fast Track

Pre-Algebra

PreAlgebra prepares seventh grade students for the more intensive Algebra I course they will encounter in eighth grade. Students continue to expand the breadth and depth of their mathematical knowledge base and generalize previously learned arithmetic skills using algebra. Each class begins with a Problem of the Day, which strengthens students' critical thinking and reviews computational and conceptual skills. Calculators and Chromebooks are routinely incorporated into lessons, allowing students to become comfortable with the technology in future math courses and in the workforce. Students regularly communicate their thinking in solution writeups, oral explanations of problems, and collaborative group activities. All students have the opportunity to participate in Mathcounts, an extracurricular club that provides additional challenges to motivate students.

Skills

Pre-Algebra

- Introduce and develop the concept of a variable
- Define and graph functions
- Recognize dependent and independent variables in a function
- Simplify and evaluate variable expressions
- Apply the distributive property
- Solve equations in one variable

Numeration

- Study concept and properties of integers
- Master all four operations with integers
- Review prime and composite numbers
- Apply prime factorization, greatest common factor, least common multiple to algebraic expressions

Geometry

- Review types angle classification and measurement
- Identify all angle relationships resulting from parallel and perpendicular lines
- Review area, perimeter, circumference of two dimensional figures
- Study and apply concept of similarity
- Learn surface area and volume of regular prisms and pyramids
- Learn and apply the Pythagorean Theorem

Problem Solving

- Create a model
- Guess and check
- Make a table
- Work with a simplified case
- Find a pattern
- Use simpler numbers

- Solve word problems in one variable
- Apply exponents to algebraic expressions
- Introduce simple operations with monomials
- Solve and graph linear equations
- Translate real life situations to linear equations
- Recognize that slope is synonymous with rate of change
- Learn scientific notation
- Compute numerical expressions with exponents
- Master order of operations
- Explore concept of negative exponents
- Compute absolute value

Decimals

- Review place value and ordering of decimals
- Review all operations with decimals
- Discover properties and patterns using calculator
- Estimate sums, differences, products, quotients
- Solve word problems

Fractions

- Simplify fractions, both numerical and algebraic
- Review all operations and extend to algebraic fractions

Ratio, Proportion, Percent

- Review concepts of ratio and proportion
- Solve word problems involving proportion
- Master fraction, decimal, and percent equivalents
- Understand percent as proportion
- Solve problems using percent

Graphs and Displays of Data

- Create broken line and circle graphs, histograms, stem and leaf plots, and scatter plots
- Interpret broken line and circle graphs, histograms, stem and leaf plots, and scatter plots
- Recognize the origin, axes, and four quadrants of the coordinate plane
- Graph points on a coordinate plane
- Define and master concept of functions
- Analyze functions as they relate to change (slope = rate of change, intercept = starting point)
- Introduce slope intercept form of linear equations
- Graph linear equations on a coordinate plane
- Collect data and create spreadsheets using Microsoft Excel

Introduction to Algebra I

The course includes writing algebraic expressions and solving equations, three-dimensional geometry, ratio and proportion, and probability. Application of these topics is built-in throughout the course. Students also learn creative problem solving.

Algebra I

The course includes solving and graphing linear equations and inequalities, exponents, polynomials, solving and graphing quadratic equations and solving systems of equations. During the year students develop and refine their problem-solving and critical thinking skills, and a variety of word problems and applications are introduced. Graphing calculators are introduced. Students participate in various Math olympiads.

Algebra I is a standard course that explores the topics below and also teaches students the study habits necessary for success in higher mathematics. We use a problem solving approach that emphasizes the continuing development of mathematical thinking and reasoning skills. Students view video lessons at home, taking notes and doing sample problems. After checking the sample problems in class, they work individually as well as in small study groups to complete problem sets. Computer software, calculators, and a variety of manipulatives are used to help students master algebraic concepts and their applications. Most students completing Algebra I are ready for Geometry or Algebra II in secondary school. However, specific placement will depend upon the student's progress as well as the program at the next school.

Probability and Statistics

- Find simple probability of an event
- Find probability of independent events both occurring
- Find probability of dependent events both occurring
- Create frequency tables
- Use Counting Principle and permutations formulas
- Learn to calculate combinations
- Find range, mode, mean, and median of data

Geometry

- Review types angle classification and measurement
- Identify all angle relationships resulting from parallel and perpendicular lines
- Review area, perimeter, circumference of two dimensional figures
- Study and apply concept of similarity
- Learn surface area and volume of regular prisms and pyramids
- Learn and apply the Pythagorean Theorem

Problem Solving

- Create a model
- Guess and check
- Make a table
- Work with a simplified case
- Find a pattern
- Use simpler numbers

Skills

- Working with Real Numbers
- Solving equations and Word Problems
- Polynomials
- Factoring Polynomials
- Algebraic Fractions and their Applications
- Functions
- Systems of Linear Equations
- Inequalities
- Rational and Irrational Numbers
- Quadratic Functions

The mathematics curriculum includes fractions, decimals, percents, number theory, order of operations, measurement, two-dimensional geometry, data analysis, and an introduction to negative numbers. Students develop basic financial literacy through a computer simulation project. All topics involve individual and group activities and solving a variety of problems. Scientific calculators are introduced. Computer spreadsheets are also introduced and used during the study of financial literacy and data analysis. Students participate in various Math olympiads.

The sixth grade math program creates a solid foundation in computational fluency, problem solving skills, and conceptual understanding. Students focus on developing their ability to understand and apply numeration, quantitative, logic and geometric concepts, with emphasis on problem solving and real life applications. Developing problem solving strategies – and the skills of calculating, performing mental math, constructing visual representations, and manipulating materials to solve problems – are an integral part of the curriculum. Through understanding the characteristics and truly grasping the definition of different concepts, students are able to expand their concrete understanding and apply these concepts more abstractly. Students work individually, in partnerships, and as a full class group on various challenges and projects.

Grade Seven Standard Track will complete Algebra I. Fast Track students will complete High School Geometry

Introduction to Algebra I

The course includes writing algebraic expressions and solving equations, three-dimensional geometry, ratio and proportion, and probability. Application of these topics is built-in throughout the course. Students also learn creative problem solving.

Algebra I

The course includes solving and graphing linear equations and inequalities, exponents, polynomials, solving and graphing quadratic equations and solving systems of equations. During the year students develop and refine their problem-solving and critical thinking skills, and a variety of word problems and applications are introduced. Graphing calculators are introduced. Students participate in various Math olympiads.

Algebra I is a standard course that explores the topics below and also teaches students the study habits necessary for success in higher mathematics. We use a problem solving approach that emphasizes the continuing development of mathematical thinking and reasoning skills. Students view video lessons at home, taking notes and doing sample problems. After checking the sample problems in class, they work individually as well as in small study groups to complete problem sets. Computer software, calculators, and a variety of manipulatives are used to help students master algebraic concepts and their applications. Most students completing Algebra I are ready for Geometry or Algebra II in secondary school. However, specific placement will depend upon the student's progress as well as the program at the next school.

Skills

- Working with Real Numbers
- Solving equations and Word Problems
- Polynomials
- Factoring Polynomials
- Algebraic Fractions and their Applications
- Functions
- Systems of Linear Equations
- Inequalities
- Rational and Irrational Numbers
- Quadratic Functions

Geometry I (High School Level)

Geometry will guide students through: points, lines, planes, angles, parallel lines, triangles, similarity, trigonometry, quadrilaterals, transformations, circles and area. This Geometry math course is divided into theory, examples and video lessons.

Skills

- Points, Lines, Planes, and Angles
- Proof
- Perpendicular and Parallel
- Triangles
- Similarity
- Right Triangles and Trigonometry
- Quadrilaterals
- Transformations
- Circles
- Area
- Congruence
- Non-Right Angles
- Conic Sections
- Analytical Geometry
- 2D vs 3D

Grade Eight Standard Track will complete Geometry. Fast Track will complete Algebra 2

Geometry I (High School Level)

Geometry will guide students through: points, lines, planes, angles, parallel lines, triangles, similarity, trigonometry, quadrilaterals, transformations, circles and area. This Geometry math course is divided into theory, examples and video lessons.

Skills

- Points, Lines, Planes, and Angles
- Proof
- Perpendicular and Parallel
- Triangles
- Similarity
- Right Triangles and Trigonometry
- Quadrilaterals
- Transformations
-
- Circles
- Area
- Congruence
- Non-Right Angles
- Conic Sections
- Analytical Geometry
- 2D vs 3D

Algebra 2

All students will study the core topics of Algebra 2: linear, quadratic, radical, rational, exponential, and logarithmic expressions, and the equations and functions that involve them. Complex numbers, systems of equations, and inverse functions will also be studied. The algebraic and graphical aspects of each topic will be emphasized. Additional topics such as analytic geometry and data analysis will be included if time permits. The applications of the TI-Nspire CX graphing calculator will be introduced. This course is open to students who have completed a full year of Algebra 1 at Star Academy only.

Social Studies

Grade Five: Early American History

Grade Five History will introduce students to the early history of the United States and the dynamics involved in forging a young American nation. We will explore the question, "What does it mean to be an American?" as we study some of the people, events, values, and conflicts that shaped early America's sense of itself and that continue to define us as a nation today. The course will begin with the period of early American colonization, with a focus on the cooperation and conflict between the European settlers and Native Americans. Next, we will explore the political, religious, social, and economic institutions that defined the colonial era. We will then consider the causes and consequences of the American Revolution, followed by the development of the US Constitution and its significance as the foundation of the new American republic. An equally important aim of this course is to teach Star Academy girls to think and read like a historian. We hope to foster a variety of specific skills that make Star Academy students active and discriminating learners. In particular, we will emphasize how to analyze a historical source, how to craft a cohesive and persuasive argument (both orally and on paper), and how to contextualize a person or event in order to understand its importance fully.

Grade Six: Ancient Cultures

In this course, students will learn about two of the ancient world's greatest powers—Greece and Rome—by exploring the meaning of two key concepts, civilization and empire. While important historical events and people will be discussed throughout the course, there will also be significant focus on what constitutes a civilization or empire using these two case studies. Students will see that a great variety of factors, including geography, contributed to the trajectory of events in these first-generation global powers. Each empire took its own unique path, filled with great opportunity and achievement as well as challenges and tragedy. In addition to the exploration of historical content, this course will focus on essential skills, including the formulation of evidence-based arguments and the development of analytical thinking. While the ancient world may seem remote and distant, students will learn that Greece and Rome both shape the world today, and that the powers of the ancient world, for better or worse, may not be so different than major powers in the modern world.

The sixth grade social studies curriculum uses the Triangle Trade as the context for exploring the central concepts of power and freedom. Through a culturally competent exploration of the roots and repercussions of American slavery, sixth graders build their own understanding of the pervasive cultural forces of race and racism in our country. This context balances global and local history, as it moves from one side of the Atlantic to the other. The story begins in our own backyard, with shipbuilding in New England. From there, it ventures to West Africa, with its rich and complex history, finally returning to the Caribbean and Southern United States. Through the exploration of four distinct regions, as well as the human narratives that add depth and connection to the content, sixth graders will acquire critical skills to serve them as they move through Star Academy and beyond. These include geography, cross cultural understanding, the use of primary and secondary sources, a foundation in world religion, the history of Africa and colonialism, and the ongoing repercussions of racism in American society.

There are social/emotional components to this curriculum as well. At this age, sixth graders begin to push boundaries of their freedom at home and at school, and to test their power through friendships. Through this theme, we can encourage students to see themselves as upstanders and channel their adolescent power for good. An essential element of this curriculum will be to empower all students, no matter their ancestry, to feel seen and validated. In order to accomplish this, students need to find both mirrors and windows in their social studies classes. We will explicitly address this concept, and give the students language to identify when they see themselves in the curriculum, and when they are learning something about experiences very different from their own. In an effort to develop empathy and compassion, students will have opportunities to reflect on moments where they find shared elements of their identity within the curriculum. There will be difficult conversations, scaffolded and supported by teachers and peers alike. Ultimately, sixth graders will walk away with a deeper understanding of the underpinnings of the society they navigate, and the confidence to take strides toward positive change.

Skills

- Observe visual information to develop conclusions
- Craft and hone questions
- Consider source bias and perspective
- Analyze and use evidence from resources to support claims
- Discussion skills
 - Attentive listening
 - Responding to the topic at hand
- Read, annotate and discuss primary and secondary sources
- Engage in research process
 - Gathering sources
 - Note taking and organizing
 - Synthesizing information into paragraphs
- Take notes
- Oral presentation
- Collaborative project work

Resources and Materials

- Traces of the Trade: A Story from the Deep North
- Belinda's Footsteps and Parallel Lives presentations from The Royall House in Medford, MA
- Sunidata: Lion King of Mali by David Wisniewski
- Uncivil podcast
- Jefferson's Sons: A Founding Father's Secret Children by Kimberly Brubaker Bradley
- Dave the Potter: Artist, Poet, Slave by Laban Carrick Hill
- Newsela
- BU Pardee School of Global Studies African Studies center
- National Museum of African American History
- Teaching Tolerance
- Facing History and Ourselves
- Equal Justice Initiative

Grade Seven: Cultural Traditions and Cultural Encounters

Grade Seven students will explore the theme of cultural exchange through the lens of two historical encounters, the Silk Road and the Crusades. In the first semester, we begin our study of the Silk Road by learning about Tang China—its government, religion, culture, values, and traditions. We then explore the founding of Islam, the expansion of the empire throughout the Middle East, and the achievements of medieval Islamic scholars. These two units come together at the end of the semester with our study of the Silk Road, a largely peaceful encounter among different cultures. In the second semester, we examine the Crusades by first studying Judaism and Christianity, followed by a close investigation of life in medieval Europe. The year concludes with an in-depth study of the Crusades, an often-violent encounter. Students will learn about Crusader and Muslim motives, battle tactics, and the rich exchanges that occurred during times of peace. Ultimately, this course is the story of how cultures interact, what happens when they meet, and why some encounters are peaceful and some are not.

Grade Eight: The Birth of Modern Europe

In Grade Eight, History students continue with the theme of cultural encounters and cultural exchanges developed in Grade Seven History. This course explores how European states emerged as dominant world powers by the 1500s, despite their lack of unity and financial strength at the conclusion of the Crusades in the 1200s. In particular, we consider how European ways of thinking shifted as its citizens entered the modern age. Significant time is spent examining the Black Death, the development of capitalism, the Renaissance, the Reformation, and the advent of strong monarchs. Students will also consider how these events shaped the way Europeans saw themselves as well as those around them. Finally, we will examine how Europeans used their new knowledge and power to conquer and subjugate the citizens of the New World.

Science

Grade Five

Close observation of the environment is the underlying theme of the year. Natural ecosystems and how they function are focal points that are enhanced by field work. Students become recorders of their environment by keeping a year-long nature journal as they learn to recognize the flora and fauna of Massachusetts. By partnering with conservation organizations, students collect data and participate in citizen science projects. Topics of study include: scientific classification, ecology, trees, fungi, birds, marine organisms, endangered species, and famous female naturalists. Experiments and activities form the backbone of the curriculum as students discover the diversity and interconnectedness of life on earth. Problem-solving skills are cultivated through small-scale engineering design challenges.

Grade Six

In Grade Six, students undertake a guided inquiry into the major systems of the human body. In frequent laboratory exercises, they hone their observation, data collection, and analysis skills, while developing an understanding of the digestive, respiratory, circulatory and musculoskeletal systems. Cell structure and processes, as well as microscope skills, are also introduced so students can understand the human body at both a cellular level and a systemic level. Students develop engineering skills through two design challenges, collaborating to investigate and test different insulation materials and to build a prosthetic arm capable of fine motor control. In the spring, students conduct independent research on a human body topic of their choice and create an electronic magazine article.

Overarching units of study for sixth grade science include space, earth science, oceans, and celestial navigation. The program has two parallel aims: 1) for students to develop an understanding of material studied through investigation, experimentation, readings, and discussions (with emphasis on the scientific process); 2) to expose students to a variety of topics that engage their interest and curiosity so that they will be scientists both inside and outside the classroom.

The first half of the year uses the 5E constructivist learning cycle to help students build their own understanding from experiences and new ideas. This model sequence is: engage, explore, explain, extend, and evaluate. The engage stage hooks student interest and personally engages them in the lesson, while pre-assessing prior understanding. The explore stage involves students in the topic, providing them with a chance to build their own understanding. In sixth grade, this happens through student led kinesthetic labs that are accessible to multiple learning styles through stations where students read, write, watch a concept, research a concept, organize concept cards, assess, and explore with a teacher. The explain stage follows and provides students with an opportunity to communicate what they have learned and figure out what it means. In the extended stage, students use their new knowledge and continue to explore a concept's implications, usually through student choice projects. Finally, in the evaluation stage, both students and teachers determine how much learning and understanding has taken place.

The second half of the year focuses on hands-on engineering challenges. Engineering is vitally important to the creation of technology used in space, on water, and on land. We will learn about oceans through the lens of plastic pollution, including: plastic pollution sources and solutions, food chains, body systems, waste management, cause and effect, human impact, identifying plastics, watersheds, the water cycle, understanding currents, and packaging engineering solutions. All lessons include a game or hands on activity, as well as problem solving questions, math, and graphing. For example, we will collaborate with technology class to investigate how we can design a solution to monitor or minimize the impact of plastic pollution on marine ecosystems and human health. In our final unit on celestial navigation, students learn the very basics of navigation, including the different kinds of navigation and their purposes. The concepts of relative and absolute location, latitude, longitude and cardinal directions are explored, as well as the use and principles of maps and a compass. Students discover the history of navigation, and learn the importance of math and how it ties into navigational techniques. The unit concludes with a full circle to our first unit on space with an overview of orbits and spacecraft trajectories from Earth to other planets.

Topics include

- Space: moon phases, tides, planets, seasons, life cycle of a star, HR diagram, electromagnetic spectrum, eclipses, Big Bang Theory, asteroids/meteors/comets, galaxies
- Earth Science: Continental Drift Theory, plate boundaries, rock cycle, erosion and deposition, Earth's layers, earthquakes, volcanoes, fossil records, geologic time scale
- Oceans: oceans intro., plastic ocean, sources and solutions, what happens to trash, water and watersheds, the water cycle, surface ocean currents, perils of plastic, identifying plastics (incorporate density and squid dissection), plastic for dinner
- Plot Your Course: where is here?, how to be a great navigator, navigating by the numbers, topo map mania, navigational techniques by land/sea/air, navigating at the speed of satellites, GPS on the move, not so lost in space

Skills

- Observe
- Categorize, data collection
- Hypothesize
- Apply scientific method through experimentation
- Analyze
- Extrapolate conclusions/synthesize
- Learn note taking, research, and independent study skills
- Collaboration with small group and large group oral discussions and written presentations

Scientific and engineering practices (from Next Generation Science Standards):

1. Asking questions and defining problems
2. Developing and using models
3. Planning and carrying out investigations
4. Analyzing and interpreting data
5. Using mathematics and computational thinking
6. Constructing explanations and designing solutions
7. Engaging in argument from evidence
8. Obtaining, evaluating and communicating information

Grade Seven

Seventh-grade science is an inquiry-based course in which students investigate aspects of earth systems science. Through experimentation and modeling, students investigate broad topics in earth science including geologic time, the earth's interior, plate tectonics, and climate change. Students problem solve, build understanding of concepts, and apply their knowledge to new situations. An important component of the course is a long-term collaborative project focused on learning how different cultures around the world are affected by earthquakes. Students then use their knowledge of structural design techniques and the engineering design process to construct earthquake-resistant buildings.

The science program in Grades 7 and 8 is a comprehensive, hands on curriculum designed to focus on science skills while utilizing students' curiosity about the world around them. Students engage in laboratory work and activities (both in the classroom and in our oncampus Wetlands Laboratory) that rigorously prepare them for high school lab sciences, yet still allow ample opportunity to explore their own interests. Topics in earth science, physics, chemistry and biology deepen students' understanding about their world and provide a medium in which to teach transferable skills such as data collection and analysis. Collaborative learning is a key aspect to Star Academy science where students learn to rely on each other to collect and make sense of data, draw conclusions and support their claims with evidence. The material is presented in such a way as to allow students to derive scientific concepts from the data that they gather, and think about sources of error inherent in any lab work. Students also further their understanding of concepts by applying them to design projects such as balloon cars, a guide for a walk through the Wetlands, and the muchloved egg drop (in conjunction with art class).

Topics include:

- General: Scientific method
- Earth Science: Layers of the Earth; Rocks and Minerals; Soil
- Physics: Motion, force, work; Newton's Laws
- Chemistry: Measurement, Mass, Volume; Conservation of Matter; Characteristic Properties (density, freezing/melting point, boiling point, solubility); Separation of Materials (such as fractional distillation); Atomic Theory, periodic table, bonding; Water properties, etc.
- Biology: Importance of water to life; Characteristics of living things; Cells (history of cells, different types, etc.); Microscopy including exploration of invertebrates in campus wetlands

Skills

- Measurement
- Data collection and organization (qualitative and quantitative)
- Analysis of data (calculations, graphing, interpreting graphs, etc.)
- Drawing conclusions from gathered facts
- Supporting conclusions with evidence
- Scientific writing (such as formal lab reports)
- Microscopy
- Collaboration
- Design thinking and engineering processes

Grade Eight

Introductory physical science is a laboratory-based course in which students investigate the physical and chemical properties of matter. Additionally, the physics of forces and the fundamentals of atomic structure are introduced. Practicing laboratory skills, solving problems during experiments, collecting and analyzing, and writing laboratory reports are major learning goals of the course. Students use their understanding of properties of matter in a cooperative exercise in which they separate and analyze the composition of an unknown mixture. Students apply their knowledge of physics in an engineering design challenge in which they construct a car powered by a mousetrap. Students design and conduct an independent investigation and present their results in a scientific poster as a culmination of their laboratory experiences.

The science program in Grades 7 and 8 is a comprehensive, hands on curriculum designed to focus on science skills while utilizing students' curiosity about the world around them. Students engage in laboratory work and activities (both in the classroom and in our oncampus Wetlands Laboratory) that rigorously prepare them for high school lab sciences, yet still allow ample opportunity to explore their own interests. Topics in earth science, physics, chemistry and biology deepen students' understanding about their world and provide a medium in which to teach transferable skills such as data collection and analysis. Collaborative learning is a key aspect to Star Academy science where students learn to rely on each other to collect and make sense of data, draw conclusions and support their claims with evidence. The material is presented in such a way as to allow students to derive scientific concepts from the data that they gather, and think about sources of error inherent in any lab work. Students also further their understanding of concepts by applying them to design projects such as balloon cars, a guide for a walk through the Wetlands, and the muchloved egg drop (in conjunction with art class).

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- General: Scientific method
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- Drawing conclusions from gathered facts
- Supporting conclusions with evidence
- Scientific writing (such as formal lab reports)
- Microscopy
- Collaboration
- Design thinking and engineering processes

World Languages: Russian Required

Spanish or Mandarin Chinese as Elective Choices

Russian: Required Yearly Grades K-8

Grade Five Russian

Who am I as a learner? And who do I want to be? What does learning Russian look like and feel like? Learning in Russian 5 is guided by exploration of these questions. As we work on listening, speaking, reading, and writing skills, students develop the dispositions required of effective learners, including tenacity, resilience, receptivity to feedback, and careful observation skills. Students will explore the fundamentals of grammar and syntax: number (singular/plural), gender, verb conjugation, spelling, and pronunciation conventions. As students learn to describe themselves, their peers and the wider world in Russian, they will actively contribute to building their understanding of the Russian language. Emphasizing creativity, communication, and cultural awareness, the Russian 5 curriculum encourages students to approach language learning from many angles and to discover which strategies and tools are best for them as language learners along the way.

Grade Six Russian

How do careful observation and listening contribute to problem solving? How are problem-solving and language-learning connected? What can I learn from making a map of a city? What can a map tell us about a city's inhabitants? What do I learn about my classmates from the maps they create? Students in Russian 6 will engage with these essential questions throughout the year as they practice listening, speaking, reading, and writing and develop their cultural competency skills. In a joyful, vibrant and creative setting, students perform skits, sing, and create works of art as they continue the every use of the Russian language and develop the dispositions of effective, independent learners. Students begin the year in Russian 6 creating a map of a Russian-speaking city and considering what aspects of a city's structure are necessary for a culture to flourish. This consideration of city life will continue in the second semester, when students pursue a research project on a city from the Russian world. Throughout the year, students will continue to develop their mastery of the fundamentals of grammar and syntax and add to their vocabulary base. They will learn to express preferences, to describe their family, school, and the world around them. As they do so, students will actively contribute to building the content and driving the curriculum of this course and will be encouraged to take charge of their learning, give themselves feedback, and develop personal strategies to achieve excellence.

Grade Seven Russian

How do the patterns I observe in the language lead to understanding? Where is Russian spoken in the world? What does it mean to be a Russian speaker? What does it mean to me to be learning Russian? In Russian 7, students will actively engage with these questions as they continue to strengthen their listening, speaking, reading, writing and cultural competency. Students will continue to hone their critical thinking skills related to language learning and will be encouraged to actively reflect on who they are as a learner and how they learn best. In Russian 7, students will develop their research skills as they explore the wide range of cultures in the Francophone world. They will encounter new nuances of the language as they expand their vocabulary base, discover new verb families, and will be able to describe future events, form questions, and develop richer and more complex sentences. Using culturally authentic sources, students will learn to negotiate travel plans and consider differences and similarities in food culture. Students will also develop and extend their reading comprehension skills as they engage with reading Russian novels.

Grade Eight Russian

What do I learn about myself and my own culture by engaging with other cultures? How does what I am learning in Russian class connect to who I am in the world? How can I be a more independent learner? These questions will serve as touchstones for our class throughout the year as students continue to develop their listening, speaking, reading, writing skills, as well as their cultural competency. Building on previous years, Russian 8 emphasizes critical thinking skills related to language acquisition, and students actively reflect on how they learn as well as what they are learning. Linguistically, students will review, refine, and build upon their foundation of grammar and vocabulary, and they will acquire new

structures, such as the passé composé, that will expand their ability to express their thoughts in Russian. They will further develop their reading comprehension skills and practice critical analysis in Russian as they read and discuss works of short fiction. They will engage in more complex writing assignments, including short essays and creative writing. Students will continue with their exploration of the Russian world.

Spanish: Optional Language Elective Track

Grade Five Spanish

Who am I as a learner? And who do I want to be? What does it mean to me to be excellent? What will I do to achieve excellence? Exploration of these questions guides student learning in Spanish. While working on listening, speaking, reading, and writing skills, students also develop the dispositions required of effective learners, including tenacity, resilience, receptivity to feedback, and careful observation skills, among others. Focusing on describing themselves, their peers and the wider world in Spanish, students actively contribute to building the content and driving the curriculum of this course. Emphasizing creativity, spontaneity, and the Arts, students approach language learning from many angles, discovering which strategies and tools are best for them along the way.

Grade Six Spanish

What do I learn from making the map? What do I learn about the other map-makers from the maps they have created? How does careful observation and listening lead to problem solving? These essential questions guide student learning throughout the year as they practice listening, speaking, reading, writing and cultural competency skills, and develop the dispositions of an effective, independent learner. Focusing on expressing preferences, negotiating life in a community, and describing the world around them in Spanish, students actively contribute to building the content and driving the curriculum of this course. In a joyful, vibrant and creative setting, students perform skits, sing, and create works of art as they acquire the basics of Spanish language. In this class, students are always encouraged to take charge of their learning, give themselves feedback, and develop personal strategies to achieve excellence.

This is the first year of a three year program. Students are introduced to the Spanish language and to the culture of the people who speak it. They learn basic vocabulary for everyday application and the rules for gender/number agreement of nouns and adjectives. The tools for written and oral expression in the language are introduced in the concept of verb conjugation in the present tense for ar verbs and subject/verb agreement. The class is conducted largely in Spanish with the emphasis placed on developing strong speaking and listening skills. Cooperative learning and interactive classroom activities are reinforced by daily homework assignments that emphasize the improvement of writing and reading abilities. Videos, computer programs, visual materials, games, and audio tapes complement the learning process. Students experience the cultural richness and diversity of Spanishspeaking countries by participating in activities involving music, dance, and food. Students learn useful and often humorous quotes and songs from a variety of countries.

Themes: School, weekend activities, likes and dislikes, family

Vocabulary: Subjects, classroom, greetings, numbers 030, descriptive adjectives, days of the week, months of the year, seasons, weather, weekend activities, family, question words, body parts, and personality traits

Structures: Gustar, ser, gender of articles and adjectives, subject pronouns, demonstrative adjectives, possessive adjectives, present tense, IR, time Preterit, irregular preterit, negation question formation, direct object pronouns, reflexive verbs.

Grade Seven Spanish

What is the pattern? What does it tell me? How will I use it? What does carefully engaging with the Arts teach me about myself and the world? These questions serve as the throughlines for Spanish III. All year, students work to develop listening, speaking, reading, writing and cultural competency skills to reach the communicative benchmarks of this course. Using many traditional art forms, including Andean arpilleras, Afro-Caribbean drumming, and traditional folk music, students explore their relationships to communities, local and global. For example, students research health challenges faced by Boston-area Latino communities, and use Design Thinking strategies to create authentic wellness posters that are displayed

throughout the city. As in previous years, this course emphasizes critical thinking skills related to language learning, encouraging students to actively reflect on how they learn. Students will develop the skills and dispositions needed to guide their own learning with classes structured to provide support and scaffolding for the individual learner.

In the second year of a three year program, seventh grade students expand their knowledge of Spanish grammar and vocabulary. In addition, students broaden their familiarity with the Spanishspeaking cultures. The class is conducted in Spanish and students speak in the target language. In class, the students experience a wide range of modalities, from traditional to collaborative and hands on. Furthermore, there are weekly quizzes and writing assignments to assess the students' progress in Spanish. Over the course of the year, the students work on projects that relate to the cultures of the Spanishspeaking world.

Themes: Food, travel/vacations, school

Vocabulary: school items, class subjects, time, countries, nationalities, numbers 1001,000,000, currency, means of transportation, items for traveling, food, meals, food stores, and irregular adjectives.

Grammar: present tense of regular and irregular verbs, the imperative, prepositions of place, giving directions, the near future, expressions with the verb to have, expressions of quantity, and direct object pronouns.

Grade Eight Spanish

What do I learn about myself and my own culture by engaging with other cultures? How can I be a more independent learner? These questions will serve as touchstones throughout the year as students develop the skill sets, listening, speaking, reading, writing and cultural competency, that are necessary to reach the communicative benchmarks of this course. In the content-rich, culturally appropriate context provided in class, students learn to discuss their childhoods, the journeys of immigrant families in the US, and global Human Rights. Building on previous years, the course continues to emphasize critical thinking skills related to language acquisition, and encourages students to actively reflect on how they learn as well as what they are learning. Students will develop the skills and dispositions needed to guide their own learning, with the class structured to provide the support and scaffolding needed by the individual learner to achieve goals she sets for herself within the context of the existing curriculum.

This is the last year of the three year program. The goals are for students to strengthen their knowledge of Spanish grammar and vocabulary as well as to study various Spanishspeaking countries. The class is conducted in Spanish and students speak in the target language. At the completion of this year, students are prepared to enter a second year high school Spanish class. In class, the students experience a wide range of modalities, from traditional to collaborative and hands on. Furthermore, there are weekly quizzes and writing assignments to assess the students' progress in Spanish. Over the course of the year, the students work on projects that relate to the cultures of the Spanishspeaking world.

Themes: Autobiography/famous people, home, future

Vocabulary: review vocabulary of family, places, nationalities, and countries, adjectives, professions, rooms and furniture of the house, household activities, pets, hobbies, musical instruments, celebrations, comparative and superlative adjectives.

Grammar: Past tense, indirect object pronouns, reflexive verbs, imperfect, future, and conditional

Chinese: Optional Language Elective Track

Grade Five Chinese

Who am I as a learner? What does learning Chinese look like and feel like? Grade Five language emphasizes critical thinking skills related to language acquisition and encourages students to develop a productive and proactive “language acquisition stance.” Students will be asked to consciously develop and strengthen specific skills and will always be asked to explain what they know and how it is that they know it. Grade Five Mandarin students will begin to acquire the building blocks of Chinese characters through drawing, singing and acting. The course also serves as an introduction to the geography of the Chinese speaking worlds. Students will consider questions such as: Who speaks Chinese? What are the cultures of these places like? Students will explore various aspects of China's cultures through stories, rhymes, games, and stories from Three Character Classics, a children book from the 13th century. Students will develop the skills and dispositions needed to guide their own learning, with the class structured to provide the support and scaffolding needed by the individual learner to achieve goals.

Grade Six Chinese

What does my learning look like? What does learning in a group look like? How does careful observation and listening lead to problem solving? What do I learn from making the map? What do I learn about the other map-makers from the maps they have created? Grade Six Mandarin, students will continue to develop their critical thinking skills, and practice using a variety of thinking routines to acquire new materials. Students will be developing five skills sets as they relate to language acquisition: listening, speaking, reading, writing and cultural competency. Pinyin – the mandarin phonetic system will be introduced, with a particular focus on tones. At the same time, students will learn to write Chinese characters, from strokes to stroke orders, radicals, and formation of characters. They will be learning to write and use about 150 characters. Typing Chinese will also be introduced. Mini research on Chinese cultural topics will be conducted, including hands-on experience with calligraphy, paper cutting, and origami. The course will use the iPad as a tool to enhance the learning. All the course materials will be available digitally to students.

Grade Seven Chinese

How and when do I learn the best? What motivates me? What do I learn about my own culture by engaging with other cultures? Grade Seven Mandarin will continue to introduce students to the official Chinese language (Putonghua), its writing system (simplified) and its culture. Students will start with a review of pronunciation rules and gradually move up to building the vocabulary foundation needed for daily conversations related to greetings, family, dates and time, and hobbies. They will also add the new vocabulary and grammar needed for visiting friends, and making appointments with teachers. Watching videos and documentaries from China, students will make connections between the Chinese culture and their home culture, explore cultural topics such as the New Year's celebration, and the Chinese education system. This class will help students explore their own learning style, and develop a productive and proactive approach that works for them as students of language.

Grade Eight Chinese

What is the pattern of my learning? What does it tell me? How will I use it? How can art teach me about people's lives and the history of their culture? This course will support students as they assimilate more complex grammar and vocabulary, and as they challenge themselves to think in Chinese. Students will acquire new expressions needed for asking and answering questions about learning languages, arranging appointments, and their daily routine at school. The course will provide students with feedback on their speaking, writing, listening and reading performance as well as their learning process and strategies. Students will learn to look for patterns in their own work and make use of those observations by way of reflection that helps them design and prioritize learning goals. Students will also encounter the Chinese culture through art. They will uncover hidden connections between Chinese language and its many art forms, learning about how art is used and created in daily life. After a trip to the Museum of Fine Arts, students will attempt to bring their knowledge of the language and their understanding of the art together through a self-directed skit. By the end of the course, class will be conducted primarily in Mandarin.

Visual and Performing Arts

Grade Five

All Grade Five students begin the year with a focus on singing, dancing, and learning to be part of an ensemble theater production, culminating in full class participation in the Winter and Spring shows. Students in Grade Five spend the second half of the year with a full semester of visual arts study. In addition, all Grade Five students will build a foundation in music performance to prepare them for the Grade Six Performing Ensemble tracks. All students will have a combination of visual art, dance, singing, and performance theatre on a rotating basis.

Grade Six, Seven, and Eight

All Grade Six students study visual arts, Russian Music, and theatre arts once per week. In addition, each student will choose one of the performing ensembles to continue their musical journey. Students may choose Chorus or Orchestra. If a student wishes to participate in both electives they should choose orchestra and take Chorus during aftercare.

Visual Art: once per week

Shapes Marks and Lines

- Exploring mark making in monoprints
- Drawing animals in a setting
- Self Portrait collage
- Drawing: mark making landscape, blind contour studies of objects and figures

Color

- Balancing color in self portrait collage
- Matching observed colors in a large scale sculpture
- Sequencing colors in a block printing project
- Exploring color and mood in a landscape painting
- Monoprint derived from earlier landscape study
- Painting: still life based on careful observation and techniques of color mixing

Texture and Pattern

- Surface texture in clay canopic jar construction
- Exploring texture and pattern in a monoprint process
- Carving into a block in a printmaking process 3D Form
- Building large scale representations of objects Clay canopic jar construction
- 3D: creation of an egg drop vehicle from a variety of materials, experimenting with various methods of attaching, shaping, gluing, coloring
- Modeling in clay: an 8th grade graduation tile or a 7th grade miniature monument
- Sculpture based on the dimensional properties of shoes and footwear

Russian Music: once per week

In sixth grade, students continue to study traditional Russian music through the culture of Russia. They will expand skills of creative musical participation through singing, playing instruments, and composition. Students explore sound and composition through the use of both original and "junk" instruments. They learn about musical theater, developing their presence and confidence onstage. They continue to practice basic notation and reading skills, and learn about the elements of Russian cultural music.

Theatre Arts

Stagecraft

In this course, students will be introduced to technical theater practices. This will include learning how to use a variety of tools in the scene shop, learn basic construction techniques, and how set up and be part of the technical crew during performances and events presented in the theater. The students will be trained in a collaborative environment that introduces aspects of professional theatre. Offered first trimester.

Scripted/Unscripted

Students will read, rehearse and perform several scenes and monologues and learn to create a variety of different characters using clues from the text. This will be paired with an introduction to improvisation through games, exercise, skits and sketches. Students will learn to think on their feet and create scenes of their own. Offered second trimester

Production

Students will help rehearse, cast, and produce a theatrical event for Spring Concert. Each grade will perform their own showcase.

Performing Arts Ensemble Block: Ensembles are a full year commitment and they renew yearly

Orchestra

Middle School Instrumental Ensembles are an opportunity for instrumentalists to play music in an ensemble setting. Students of all levels and abilities can participate in strings or woodwind instruments. Students will need to complete a brief audition at the beginning of the school year so they can be placed in the appropriate group. Families will be responsible for purchasing or renting musical instruments including transportation and upkeep. All groups perform throughout the school year.

Middle School Chorus

Chorus will be divided into two sections. Both groups will learn the same music and will join together as a large choral ensemble. The two sections will include those doing Chorus during the day at Star Academy and those taking Chorus during aftercare. This will allow a student to choose both orchestra and chorus throughout each year. Chorus will learn music to help develop basic choral singing skills while learning good tone production, intonation, breath control, phrasing, diction, basic sight singing skills, use of dynamics and articulation, and following a conductor. Chorus will have several opportunities to perform during the year.

Health and Wellness: for Grades Five and Eight Only

Grade Five: Our Bodies

Students spend their year in Health class focusing on building a safe, trusting community of peers; exploring physical, emotional and social health; goal setting, decision making and communication skills, navigating relationships, understanding the basics of human development and puberty; and practicing healthy self management behaviors. Students add a particular emphasis on the development of social-emotional skills and healthy decision-making, both in real life and online. In addition, they focus on defining family, recognizing positive and negative influences in their lives, healthy nutrition, fitness, and the importance of effective communication in relationships. Students are encouraged to participate in weekly journal activities, and in conversations with adults in their families and communities.

Grade Six and Seven

These grades continue with our traditional Home Economics Study for the entirety of the year.

Grade Eight: Our Mental and Physical Responsibilities and Rights

Students prepare for middle school social life in Health Class, exploring self-esteem, healthy communication, moral and ethical peer interactions; and ways to prevent and stand up to exclusion and unkindness. In addition students practice ways to cope with stress, the importance of sleep, and the negative impact of alcohol, drugs and tobacco. Through safe discussions, group projects, and the use of media and technology, students learn to interact with and participate in society in strong and responsible ways. Students delve more deeply into questions about their own physical development and life path, and they develop important skills to take care of themselves and advocate for others. A special emphasis is paid to mental health, analyzing positive and negative influences, sexuality, effective communication skills including social networks, practicing refusal and decision making skills, managing stress, and finally, making a successful plan for transition into High School.

Physical Education

Each year, students are required to participate in diverse instructional physical education daily. Additionally, after school sports options are available for students beginning in Grade Six. The Physical Education program is developmental and skill-based. The program includes cooperative games, standard games, such as capture the flag and ultimate Frisbee, and team sports including soccer and basketball. Students practice motor and sports skills throughout these activities. Students develop sports skills through movement exploration, specific skill work and playing games.

All students participate in the following units:

Karate: Twice per week

Karate, the art of self defense, is also a very practical life skill. The life lessons taught within our Karate units extend far beyond the realm of the physical and into the world of the mental. We tackle obstacles in everyday life including rage, sadness, and our physical bodies. Discipline is at the core of all Karate technique. Students learn the art of self defense through safe, engaging practicum. Students may earn Karate belts as they progress through our program which begins in Kindergarten.

Dance: Once per week

In this class, students will learn set repertory (existing dances), experiment with movement improvisation, create their own compositions and choreography, and perform in class for each other. The class allows students to take risks, try new things, and see what it is like to create their own dances. It is not focused on performance in order to allow for creative exploration and risk taking.

Gymnastics: Once per week

Students tackle flexibility, body movement and comfort, as well as basic level gymnastics technique. Students are encouraged to create their own routines that range from physical gymnastics to rhythmic gymnastics. This class is taught in tandem with yoga and pilates technique for whole body wellness.

Physical Education: Once per week

Skills

- Locomotor Movements: Walk, Run, Hop, Slide, Jump, Crawl, Roll
- NonLocomotor Movements: Swing, Bend, Stretch, Twist, Turn, Dodge, Push, Pull
- Sports Skills: Throw, Dribble, Kick, Bat, Catch, Shoot (basketball), Volley

Activities

Soccer, Softball / Baseball, Field Hockey, Frisbee, Kickball, Basketball, Volleyball, Lacrosse, Team Handball, Track and Field, Tennis, Flag Football, Fitness Exercises, Relays, Cooperative Games, Group Challenges, Obstacle Courses, Lifetime Fitness Activities

STEM Technology: Twice Per Week

The technology program at Star Academy starts with the why – why should we teach technology at all? The answer is we don't teach "technology " we teach self reflection, empathy, and problem solving (know themselves, understand others, and shape the future).

The medium we work within to accomplish this is digital tools, and we teach students both existing skills and how to learn new technology on their own. While the process of learning new tools is inherently valuable (growth mindset, exploration, logic, sequential thinking, curiosity), ultimately we teach technology because of the opportunities it can provide for students to improve themselves and make a positive impact on the world.

We approach this through focusing on four main curricular categories that spiral throughout all grades (PreK - 8): •

Engineering & Design Thinking

- Multimedia Production
- Programming & Robotics
- Publishing

Engineering & Design

How does it work? Why did they build it like that? What happens if I do this....?

Harnessing and developing children's natural curiosity is one of our main goals, and the engineering and design aspects of the technology curriculum are essential components. In the early childhood years, this means taking apart computers in PreK with real tools to see how they work, learning to create circuits and simple sound machines in Kindergarten to create custom electronics, and lighting up entire model cities with LED "street lights" to represent turn of the century technology.

In the elementary years, the engineering and design challenges focus more on solving real world problems using more sophisticated tools. We begin to introduce 3D printing and design in our studies of assistive technology, crafting architectural models for civil engineering exercises, and designing novel human/computer interface devices. By the upper elementary and middle school years, students become their own project leads, choosing for themselves what challenges to take on and learning to use new tools independently.

Multimedia Production

Human beings are storytellers - the digital tools that students learn in multimedia production are always first and foremost taught in service of developing a better story, a more persuasive message, or a stronger emotional connection. We introduce and develop skills across a wide spectrum of media; students learn digital photography, image manipulation, video editing and green screen production, digital music, and animation techniques. Initially taught as individual tools and techniques, by the end of each year students are combining all they have learned into class plays, movies, music videos, and original works of art.

Programming & Robotics

Programming and robotics lessons are integrated into classroom math and science activities, and taught as stand-alone topics in technology classes. We begin as early as PreK, where the focus is on physical movement, directionality, and learning to sequence a set of instructions. Children will "program" their teachers and classmates to move around a room, program simple robots to move through block mazes constructed by their classmates, and learn to "debug" simple sequences.

As children advance in grade levels, we begin to incorporate concepts such as variables, loops, and function calls to write more complex code. In the elementary grades this means constructing and programming Lego Mindstorm robots to solve engineering challenges, and creating programs in Scratch to solve mathematical equations. By the middle school years, students are writing much more complex code and building robots with basic AI routines in simulation scenarios such as search and rescue operations, agriculture, and environmental cleanup.

Publishing (desktop & web)

Who is my intended audience? What is my message? How can I best convey it?

These questions are our constant guide in teaching students the tools and techniques of desktop and web publishing. From basic skills such as keyboarding and word processing to more advanced blogging and website creation, our goal is to give students a wide array of tools and experiences in communicating their thoughts and ideas. We also cover topics such as social media and online portfolios, focusing not just on how to use these tools, but when and why to use them, and how to protect your privacy.

Grade Five: Library, Typing, and Technology Skills

In this yearlong, twice weekly course, students learn library catalog basics, subscription databases, and search engines. Students learn the basics of the Google Suite of software if they are not already familiar. They will create Gmail and Google accounts if they do not already have them. They learn to ask probing research questions, assess sources for reliability and objectivity as well as practice good scholarship by accurately paraphrasing information and citing sources using MLA format. Students also continue learning typing through the program Keyboarding Without Tears. The second trimester and beyond is primarily devoted to each student completing a research project of their choosing after learning the general basics of Computer Science, Robotics, and Coding. Students also explore digital citizenship and online safety.

Grade Six: Typing, Robotics, and Coding For Embedded Systems

In this twice-weekly, hands-on course, students learn how to program a computer to create dynamic multimedia output using the Processing language (Java-based) and to write code for microchips embedded within electronics using the Arduino language (C-based). Students develop the skills of text-based syntax and gain experience with various data types, conditionals, functions, user inputs, graphics, physical computing, and more. They are introduced to making video games, apps, and interacting with electronics to automate robots. Students continue Keyboarding Without Tears and additional Computer Science Training.

In the sixth grade, we focus on taking greater personal responsibility for learning and applying new skills, preparing for the transition to middle school. There is a greater focus on digital citizenship and online publishing, we introduce a 1:1 computer program and school email account, and focus on long term projects that require integrating multiple skills and group collaboration. Examples include coding and electrical wiring for the interactive media project "Evoking Autumn", using digital tools for classwork and homework workflows, video and audio editing clips for world language weather reports, digital photography editing and manipulation techniques, graphic design, and animated superhero trope takedowns

Grade Seven STEM

Students in Grade Seven take all of the courses described below, one each trimester. All students will have taken all courses by the end of the year. In Grades 7 and 8, the focus shifts from discrete classes to using specific software applications embedded in content area curriculum. For example, students learn to use GIS mapping software and spreadsheets to support data analysis in Social Studies, use multimedia presentations to enhance persuasive speeches on social justice topics in English class, manage online portfolios, and use online collaboration for project management. There is also an important focus on self reflection, social media use, and learning to navigate an online social world in healthy ways. Seventh graders also complete a Design Thinking Project in which they choose a problem or issue to solve, rapid prototype solutions, and present the process at a Design Expo in March.

Grade Seven: Circuits, Components and Signals

In this course, students build on their knowledge of programming from Grade Six and develop a deeper understanding of electronics by learning to build and design circuits using a variety of components such as LEDs, servo motors, potentiometers, piezo buzzers, and proximity sensors, to name a few. Students prototype, test and revise their circuits on breadboards. In addition, embedded coding is used to interface with their designs. This is a semester-long course that meets 1x per cycle during the Grade Seven year.

Grade Seven: Computer Aided Design for 2D and 3D Fabrication

Using Computer Aided Design (CAD) software to render and fabricate precise geometries for mechanical parts

and interesting forms, students will practice methods in 3D visualization, additive and subtractive manufacturing, rapid prototyping, measurement, and quality assessment. In the process, they will gain

experience with tolerance, precision, and materials of varying characteristics through a lens of engineering design. 3D printers and laser cutters/engravers, operating in 2D, will be used regularly, and students will learn about how these machines function, how they are maintained, how to design for their strengths, and how to test their designs as the basis for improvement. This is a semester-long course that meets 1x per cycle during the Grade Seven year.

Grade Seven: Typing, Computer Science, Engineering

Students continue Keyboarding Without Tears while also continually learning up-to-date information regarding Computer Science. Programming and hands-on activities are included. This program shifts from year-to-year based on the expertise of our faculty.

Grade Eight STEM Studios

Grade Eight students have the choice of a design team where they will have the opportunity to apply the skills learned in their Grade Five-III STEM classes to interdisciplinary engineering challenges. Teams are thematic in nature and follow a design thinking or project based learning model. All projects will involve some coding, electronics, and 3D design, in a context chosen by the student. Grade Eight teams will meet twice weekly. Students are placed into groups for the labs below. All students will be able to participate in all labs.

In Grades 7 and 8, the focus shifts from discrete classes to using specific software applications embedded in content area curriculum. For example, students learn to use GIS mapping software and spreadsheets to support data analysis in Social Studies, use multimedia presentations to enhance persuasive speeches on social justice topics in English class, manage online portfolios, and use online collaboration for project management. There is also an important focus on self reflection, social media use, and learning to navigate an online social world in healthy ways. Seventh graders also complete a Design Thinking Project in which they choose a problem or issue to solve, rapid prototype solutions, and present the process at a Design Expo in March.

The Automation Lab

With millions of years of evolutionary experience, nature has found wonderful solutions to common problems. Without leadership, ants organize food collection lines, in-the-dark bats adapt high frequency sound to "see", and the branching patterns of trees optimize their collection of solar energy. Thus, students in the Automation Lab will approach their projects from the perspective of "biomimetics", drawing from biology for design inspiration. Students will integrate programming, electronics, 3D design, and other prototyping skills and apply them to create machines or robots that function autonomously. They will develop habits of prototyping, engage in a design cycle, further their fabrication skills, establish methods of quality control, and participate in interdisciplinary problem solving.

Data Acquisition Team

Building devices to make real measurements, you can finally settle questions about who can make the most noise and which is the smelliest cheese, you could answer local environmental questions about the pollutants around us and nearby soil quality, you could begin scientific investigations into heart rate and electrical activity in muscles, or you could follow curiosity to allow us to hear what bats would sound like if only we could hear ultrasonic frequencies. As a member of the Data Acquisition team, students build and use scientific instruments, then visualize data to illuminate the invisible and experience the hidden. Students will be introduced to "big data" and find agency through information. They will integrate programming, electronics, 3D design, and other STEM skills and apply them to the acquisition, processing, and application of data. They

will develop habits of prototyping, engage in a design cycle, further their fabrication skills, establish methods of quality control, and participate in interdisciplinary problem solving.

The Prototyping Lab

For anyone who ever wanted their umbrella to tell them when to bring it, their vacuum to check a calendar and operate itself, their fish to be fed by a mobile app, or for anyone who ever noticed that a lot of things could be better, the Prototyping House will rethink and redesign the commonplace to be smarter, more efficient, more interesting, and more capable. Students will integrate programming, electronics, 3D design, and other prototyping skills and apply them to tinker with the things around us and to fabricate original ideas. They will develop habits of prototyping, engage in a design cycle, further their fabrication skills, establish methods of quality control, and participate in interdisciplinary problem solving.

Manifest Arts STEAM Studio

Art has always had a relationship with technology. Painters needed canvas and sculptors needed chisels, and you have LEDs, servo motors, infrared sensors, 3D printers, computers, and so much more. In the Manifest Arts Studio, you will design physical objects that change or evolve over time and in relation to their environment. Students integrate programming, electronics, 3D design, and other prototyping skills and apply them to produce works of art with which we physically interact. They develop habits of prototyping, engage in a design cycle, further their fabrication skills, establish methods of quality control, and participate in interdisciplinary problem solving.

Temporal Arts STEAM Studio

Performing arts are experienced temporally, as a function of time, and they have also evolved over time, as technology defined the sound of each era's music, advanced complex stage productions, and created film from static pictures. When we push technology forward, we can advance art itself. The Temporal Arts Studio will engineer equipment for creating works of sound and motion. Students will integrate programming, electronics, 3D design, and other prototyping skills and apply them to produce art that we experience through performance. They will develop habits of prototyping, engage in a design cycle, further their fabrication skills, establish methods of quality control, and participate in interdisciplinary problem solving.

Interaction Design Studio

Design is problem solving, but also much more. Designers make the art of our daily lives, they shape technology for human needs, they apply thought to rationally make decisions from the minutiae of fonts on an interface to the overarching architecture of a machine and beyond, and they bridge fields from engineering to art. Members of the Interaction Design Studio will exercise brainstorming techniques, utilize methods of rapid prototyping, conduct qualitative research, iterate, and put human interaction front and center as they explore solutions, looking beyond merely overcoming technical hurdles to make things that reflect the people they are made for. Students will integrate programming, electronics, 3D/2D design, and other prototyping skills, and apply them to design the products with which we interact.

Star Academy Middle School Clubs & Organizations

All clubs and organizations are during Home Room or Aftercare. Various clubs are offered complimentary during Home Room classes. The additional organizations are held during our after school program. Additional fees will apply.

Art Club

Chorus (if not taken during the school day)

City STARS: Community Service

Debate & Speech Club

Drama Club

Literature Club

Mandarian Club

Math Club

Math Olympiads (see below)

Mock Trial

Model UN (see below)

Russian Club

Science Club

Student Council

Spanish Club

STEAM Club

The Star (school newspaper)

Yearbook

Math Olympiads

We currently participate in four Math olympiad style clubs/organizations. This is done outside of school, though we prepare during class as well. Students who are interested take various testing forms and are ranked national/regionally. The olympiads we participate in are:

- Math Kangaroo (Grades K-8)
- MOEMS (Grades 4-8)
- Math League (Grades 2-8)
- AMC8 (Grade 8)

Model United Nations

Model UN (MUN) allows students to attempt to resolve real-world problems using the UN's structure and rules of procedure. In preparation for a MUN conference, student delegates work in teams to prepare draft resolutions that accurately reflect their assigned country's position on a current issue. Club meetings also review negotiation techniques, conflict resolution strategies, and public speaking skills. Students in MUN may participate in a regional conference at Northeastern University and an international conference held in New York City at the United Nations Headquarters.

Sports (Intrascholastic Competition)

All sports programs are presented after school. Additional fees will apply.

Both campuses will offer a program of intrascholastic competition for students in Grades 5-8. Students are encouraged to participate in at least one of the three seasons per year.

Offerings include:

Fall: soccer

Winter: basketball

Spring: cross country, track and field

Children work with others in their age group under the supervision of a coach. They learn strategies, positions on the field, skills specific to the sport, and skills to develop effective teamwork. The Star Academy Sports Program encourages group cooperation in a competitive setting, as each team plays games with the other campus and potentially neighboring schools of similar age and ability.