



**Middle School
2024-2025
Academic Planning Guide**

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Our Mission

Never Stop Innovating

Our Vision

We envision a world of exponential possibilities where every child develops the innate knowledge, skills, creativity, and character to thrive, lead, and succeed in an ever-changing future.

Welcome to STEM School Highlands Ranch. We are an innovative, free, public, charter learning community that exists to innovate K-12 education in order to prepare every student to lead change, solve problems, and succeed in an exponentially changing world.

We are more than a school. We are a think tank, a learning lab, and a catalyst for creativity. We are a haven for continual innovation, creative exploration, and rigorous discovery. We defy definition and break with convention. Because that's what innovators do.

We see school differently. Although our curriculum has a college preparatory focus with emphasis on developing core liberal arts skills in reading, writing, mathematics, and science, we use creativity, problem-solving, and innovation to inspire and challenge our students.

We are more than just STEM. We infuse STEM into all classrooms. We challenge students with STEM-based, real-world problem solving fueled by constant exploration, inquiry, and discovery.

We foster innovation. We equip every student, every day, in every classroom with the knowledge, skills, confidence, and character to thrive in a constantly changing world. By using continuous inquiry, constant discovery, and trial and error as critical pathways to new discoveries, we create a culture of safe failure and fearless innovation.

We empower students. We put students in the driver's seat of their learning, engaging and empowering them to push their own unique boundaries of innovative learning, thinking, and doing.

We see teachers as catalysts. Here, teachers are role models and innovation coaches who provide the framework for learning. Our teachers are experts in teaching appropriate use of technology, collaboration, and teamwork that sparks interest in STEM and learning at an early age.

We innovate and learn together. Here, we leverage the power of collaboration, teamwork, and group think to build, design and create solutions to real-world problems.

We're fostering tomorrow's innovators, creators, and change agents. We work tirelessly to nurture and develop integrity, respect, responsibility, and honesty within our students, and take pride in encouraging well-rounded student development.

Middle School Policies

Availability of Classes: While every effort will be made to provide the classes a student has requested during registration, some classes may not be available due to student enrollment numbers, staffing, and budget.

Adding/Dropping a Middle School Class: School counselors are responsible for, and make, ALL possible schedule changes. Schedule changes are allowed **within the first 10 days of the semester**. Changes after this date are considered on an individual basis.

Reasons for Schedule Changes Include:

- Missing required classes
- Level changes if appropriate
- Teacher Request

To request a schedule change, please use our schedule change form located on our website.

High School Credit for Middle School Students

Compliance with DCSD Policy IKF-R-2

A student may earn credits towards a Douglas County School District high school diploma prior to the official start of the 9th grade year.

1. Credit will automatically be awarded for earning an “A” in:
 - a. Any Douglas County School District high school summer session content course(s) completed preceding the start of the 9th grade year
 - b. Any Mathematics course(s) which exceeds the expectation of an Algebra 1 course
 - c. Any World Language course(s), which exceeds the expectations of Level 1
 - d. Any content area course meeting Board of Education criteria, and which exceeds the expectations of a typical Douglas County 9th grade course, as approved by the high school building administration.
2. **Students who earn a grade other than an “A” will declare during their Junior year whether or not the course will be used to meet high school graduation requirements by submitting a Declaration of Credit for Middle School Courses form to the high school registrar. Once the form is submitted, the credit cannot be removed from the high school transcript.**

Core Class Placement

Students are automatically placed in standard classes. For accelerated course placement, students must meet the course qualifications located here, and have a teacher recommendation.

Accelerated Course Placement Criteria

- High Academic Achievement
- Self motivated and self discipline
- Good organizational skills
- Follows STEM’s attendance policy
- Maintains high standards of academic integrity

Course Descriptions for High School Courses

Please see the High School Academic Planning Guide at www.stemk12.org.

Sample Course Interpretation

Language Arts 6			
Year long course	6th grade	No fee, although students will be asked to supply required novels throughout the year	No prerequisite, required course.

Course Title: Language Arts 6

Course duration: Year long course

Grade level(s) of students who can take the course: 6th grade

Fees: No fee, although students will be asked to supply required novels throughout the year

Prerequisites: No prerequisite, required course.

Course Descriptions by Department

Language Arts

Language Arts 6			STEMMS016S1/S2
Year long course	6th grade	Students will be asked to supply required novels throughout the year	Required course

Following the Colorado Academic Standards, emphasis is on communication through a systematic integration of grammar, writing structure, vocabulary, and reading comprehension. Short stories, writing, novels, plays, poetry, grammar, and vocabulary are the building blocks of this course.

-OR-

Language Arts 6 Accelerated			STEMMS016HS1/S2
Year long course	6th grade	Students will be asked to supply required novels throughout the year	Required course- Must meet qualifications for this course

Following the Colorado Academic Standards, this is an accelerated course with emphasis on communication through a systematic integration of grammar, writing structure, vocabulary, and reading comprehension. This course is intended for students capable of a challenging curriculum, and it provides the foundation for further Honors and Advanced English courses. Short stories, the writing process, the reading of novels, plays, and poetry are taught, in addition to grammar and vocabulary.

Language Arts 7

STEMMS017S1/S2

Year long course	7th grade	Students will be asked to supply required novels throughout the year	Required course-
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Following the Colorado Academic Standards, emphasis is on communication through language, composition, literature, and the development of reading skills and strategies. Students develop language, vocabulary and speech skills; they develop in composition by writing paragraphs and essays. Literacy skills are utilized and strengthened through reading short stories, poems, and novels. Foundational grammar and standard usage are taught in an integrated approach alongside composition and the reading of literature.

-OR-

Language Arts 7 Accelerated

STEMMS017HS1/S2

Year long course	7th grade	Students will be asked to supply required novels throughout the year	Required course Must meet qualifications for this course
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Following the Colorado Academic Standards, emphasis is on communication through language, composition, literature, and the development of reading skills and strategies. Students develop language, vocabulary and speech skills; they develop in composition by writing paragraphs and essays. Literacy skills are utilized and strengthened through reading short stories, poems, and novels. Foundational grammar and standard usage are taught in an integrated approach alongside composition and the reading of literature

Language Arts 8

STEMMS018S1/S2

Year long course	8th grade	Students will be asked to supply required novels throughout the year	Required course
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Following the Colorado Academic Standards, emphasis is on communication through composition of well-structured sentences, poems and paragraphs. Short stories, novels, plays, and poetry are the building blocks of the course. Foundational grammar and standard usage as well as vocabulary are taught alongside reading and literature, as well as through the continuation of grammar practice.

-OR-

Language Arts 8 Accelerated

STEMMS018HS1/S2

Year long course	8th grade	Students will be asked to supply required novels throughout the year	Required course- Must meet qualifications for this course
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Following the Colorado Academic Standards, this is an accelerated class with emphasis on communication through composition of well-structured sentences, poems and paragraphs. This course is intended for students

capable of a challenging curriculum and it provides a strong foundation for subsequent Honors and Advanced Placement English classes. Short stories, novels, plays, and poetry are the building blocks of the course. Foundational grammar and standard usage as well as vocabulary are taught alongside reading and literature, as well as through the continuation of grammar practice.

Mathematics

Math Course Sequence

Students progress through mathematics courses in the order indicated below.

Math Course I → Math Course II → Pre-Algebra → Algebra I → Geometry → Algebra II

Course I			STEMMS026S1/S2
Year long course	6th	N/A	Math placement testing

This course introduces students to numbers and operations, algebraic representations, integers, measurement, estimation, fractions, decimals, percentages, and negative numbers. Students will touch on some basics of geometry and statistics.

Course II			STEMMS027S1/S2
Year long course	6th-7th	N/A	Math Course I or demonstrated proficiency of topics covered in Course I on the STEM Math Placement assessment

This required course is designed to reinforce, and expand upon, concepts and skills introduced in the previous course work. The curriculum spans a wide-range of proficiencies which include reasoning, connecting, operations with rational numbers including integers, evaluating expressions, solving 2-step equations, circumference and diameter, proportional reasoning with scale drawings and percents, appropriate use of calculators, probability, statistics, and graphing.

Pre Algebra			STEMMS028S1/S2
Year long course	6th-8th	N/A	Math Course II or demonstrated proficiency of topics covered in Course II on the STEM Math Placement assessment.

This course is an introduction to the arithmetic skills needed to succeed in Algebra I. Students will be exploring the fundamentals of arithmetic as well as the topics of number theory and basic equations, inequalities, and ratios through an emphasis on problem solving, computation, and mathematical applications.

Middle School Algebra I

STEMMS029S1/S2

Year long course	6th-8th	N/A	Pre Algebra or demonstrated proficiency of topics covered in Pre Algebra
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This course introduces students to solving problems by using variables to represent unknown quantities and then solving for those unknown quantities by writing equations and inequalities. Course topics include a review of the order of operations with integers, solving equations, inequalities and absolute values equations. Students will work extensively on solving and graphing linear system/inequalities and quadratic equations. Additional topics will include rules of exponents, simplifying and factoring quadratics, operations with polynomial, radicals, and the quadratic formula. Students who successfully complete this course with an 85% or higher will be prepared to move on to Geometry.

NOTE: *If your student is in Geometry or higher, please refer to the HS Planning Guide for course descriptions*

Science

Science 6

STEMMS036S1/S2

Year long course	6th	N/A	Required course
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The sixth grade science course provides students with an understanding of the general concepts of earth science. It is a full year course in which students study the structure and composition of space and earth sciences including astronomy, earth's atmosphere, oceans, surface waters, landmasses, and interior. Students investigate the dynamics of the earth's changing surface and the role that energy plays in earth systems. Students learn how the earth's ecological systems support life through environmental relationships and natural cycles. Students develop an understanding of ecological resources and wildlife conservation. Students relate the flow of matter and energy within an ecosystem. Through "hands-on" investigation, students learn to conduct scientific investigations, think scientifically, and use scientific tools and technologies. Students learn to communicate scientific information and processes, and understand how developments in science and technology affect society and the environment. The depth and breadth of concepts are determined by course length.

-OR-

Science 6 Accelerated

STEMMS036HS1/S2

Year long course	6th	N/A	Required course Must meet qualifications for this course
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In this accelerated course, greater emphasis is placed on scientific inquiry and methods. The material and pacing of the course is accelerated, as well.

Science 7

STEMMS037S1/S2

Year long course	7th	N/A	Required course
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The seventh grade science course provides students with a general understanding of the concepts of life science. Students can use the full range of science and engineering practices to make sense of natural phenomena and solve problems that require understanding how individual organisms are configured and how these structures function to support life, growth, behavior and reproduction. Students investigate the evolutionary structure, function, and processes of living things. Students learn how cells divide, grow, and convert matter and energy to sustain life. They learn how organisms reproduce and pass hereditary characteristics from one generation to the next. Students investigate similarities and differences in living organisms, and how living things have changed over time. Students learn about the human body systems, focusing on the nervous system, and look at factors that are responsible for maintaining human health. Students learn to conduct scientific investigations, think scientifically, and use scientific tools and technologies. Students learn to communicate scientific information and processes, and understand how developments in science and technology affect society and the environment.

-OR-

Science 7 Accelerated

STEMMS037HS1/S2

Year long course	7th	N/A	Required course Must meet qualifications for this course
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In this honors course, greater emphasis is placed on scientific inquiry and methods. The material and pacing of the course is accelerated, as well.

Science 8

STEMMS038S1/S2

Year long course	8th	N/A	Required course
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This course is designed to introduce students to topics dealing with the non-living, natural world. Physical science is generally divided into two main categories: Chemistry and Physics. Topics to be examined in Chemistry include properties of substances, chemical changes, matter, and the structure of matter. Topics to be examined in Physics include Mechanics (motion, force and energy) waves and electromagnetism.

-OR-

Science 8 Accelerated

STEMMS038HS1/S2

Year long course	8th	N/A	Required course Must meet qualifications for this course
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In this honors course greater emphasis is placed on scientific inquiry and methods. The material and pacing of the course is accelerated as well.

Semester Course	6th-8th	N/A	Elective
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This course is designed to give students outside of 6th grade or 6th graders who would like to devote additional time an opportunity to partake in the process of determining a real-world problem, completing research, designing an experiment to improve this problem, testing the designed experiment, and sharing the collected results. The overall goal of the class will be to send students to the Denver Metro Regional Science Fair and beyond.

Social Studies

Social Studies 6

STEMMS046S1/S2

Year long course	6th	N/A	Required course
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Following the Colorado State Standards, 6th Grade Social Studies will focus primarily on the continents of North & South America. After beginning with a unit on world geography, the class will then explore the origins, cultures, and economies of Native American civilizations. Students will learn to use geographic tools to understand location, see the unique cultural creations of the Americas, and understand the everyday lives of Native Americans. The Maya, Aztec, Inca and other ancient Meso American civilizations will receive attention. Along with other various Indigenous tribes of the future United States.

In the 2nd Semester, we will see the arrival of the European Explorers and how they interacted with the Indigenous cultures. We will explore the origins of our current interconnected world economy that started with Columbus, then see how the growth of this economy influenced the outbreak of the American Revolutionary War, where we will end the year.

-OR-

Social Studies 6 Accelerated

STEMMS046HS1/S2

Year long course	6th	N/A	Required course Must meet qualifications for this course
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Following the Colorado State Standards, 6th Grade Social Studies will focus primarily on the continents of North & South America. After beginning with a unit on world geography, the class will then explore the origins, cultures, and economies of Native American civilizations. Students will learn to use geographic tools to understand location, see the unique cultural creations of the Americas, and understand the everyday lives of Native Americans. The Maya, Aztec, and Inca civilizations will receive particular attention along with the various tribes of the future United States.

In the 2nd semester, we will see the arrival of European explorers and how they interacted, both positively and negatively, with the Native cultures. We will explore the origins of our current interconnected world economy that started with Columbus, then see how the growth of this economy influenced the outbreak of the American Revolutionary War, where we will end the year.

Year long course	7th	N/A	Required course
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Following the Colorado State Standards, 7th grade History will cover the period of history surrounding the United States from the late nineteenth century until the end of WWII. The following topics and their influences on modern society will be analyzed: U.S. Geography, The rise of the United States as an up and coming world superpower, the political and military forces that created WWI and the Russian Revolution, the Roaring Twenties, the Great Depression, and the New Deal, the rise of totalitarianism in Europe and the events and causes of WWII through 1945. Cross-curricular integration projects with Science, Technology, Engineering, Math and Language Arts are emphasized.

-OR-

Social Studies 7 Accelerated

STEMMS047HS1/S2

Year long course	7th	N/A	Required course Must meet qualifications for this course
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Following the Colorado Academic Standards, 7th grade Honors History will cover the period of history surrounding the United States from the late nineteenth century until the end of WWII. The following topics and their influences on modern society will be analyzed: U.S. Geography, The rise of the United States as an up and coming world superpower, the political and military forces that created WWI and the Russian Revolution, the Roaring Twenties, the Great Depression, and the New Deal, the rise of totalitarianism in Europe and the events and causes of WWII through 1945. The Honors-level course provides a more accelerated, in-depth analysis of the topics, with a focus on primary source reading, historical research and essay writing, and at least one historical novel. Cross-curricular integration projects with Science, Technology, Engineering, Math and Language Arts are emphasized

Social Studies 8

STEMMS048S1/S2

Year long course	8th	N/A	Required course
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8th Grade Social Studies integrates history, geography, economics, personal financial literacy and civics into a single course based on U.S. history from the Revolutionary War era through Reconstruction. The course adheres to the Colorado Academic Standards with a focus on early U.S. history, although our subject matter at times includes other countries and time periods to enhance understanding and perspective. We cover the origins and events of the American Revolution; the war's aftermath and the constitutional convention; the rise of political parties; economic transformation, early industrialization and resulting social change; the expansion west and competition for resources; the rise of sectional conflict; slavery and the origins of the Civil War; and Reconstruction and the related transformation of our constitutional system of government. We also address skills critical for students to succeed in social studies and flourish in our ever changing society and economy.

-OR-

Social Studies 8 Accelerated

STEMMS048HS1/S2

Year long course	8th	N/A	Required course Must meet qualifications for this
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			course
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8th Grade Social Studies - Accelerated integrates history, geography, economics, personal financial literacy and civics into a single course based on U.S. history from the Revolutionary War era through Reconstruction. The course adheres to the Colorado Academic Standards with a focus on early U.S. history, although our subject matter at times includes other countries and time periods to enhance understanding and perspective. We take an in depth view of the origins and events of the American Revolution; the war's aftermath and the constitutional convention; the rise of political parties; economic transformation, early industrialization and resulting social change; the expansion west and competition for resources; the rise of sectional conflict; slavery and the origins of the Civil War; and Reconstruction and the related transformation of our constitutional system of government. We also address skills critical for students to succeed in social studies and flourish in our ever changing society and economy.

Computer Science

****Note: One semester of Computer Science is required each year.**

Computer Science 1

STEMMS106

Semester long course	6th- 8th	N/A	Required course
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The primary goal of this course is to provide students with a variety of computer skills that will be useful throughout the remainder of their education and into their lives beyond school. An emphasis is placed on developing high-level thinking skills and creating knowledge and skills that will be used in everyday lives inside and outside of the educational setting. Computer skills and knowledge such as word processing, basic formatting and formulas in spreadsheets, exploring file systems, managing online storage drives and creating slide presentations.

Computer Science 2

STEMMS107

Semester long course	6th-8th	N/A	Requires Computer Science 1
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The primary goal of this course is to provide students with a variety of computer skills that will be useful throughout the remainder of their education and into their lives beyond school. An emphasis is placed on developing high-level thinking skills and creating knowledge and skills that will be used in everyday lives inside and outside of the educational setting. Computer skills and knowledge such as computer hardware, web design (HTML5 and CSS3), 2-D image manipulation, 3-D modeling, and more will be covered in this course. Please note this will be a very hands-on course, you will be required to work in teams for some of the projects.

MS Game Design

STEMMS110

Semester long course	6th- 8th	N/A	Requires Computer Science 1
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This course is an introduction to game design and development using the JavaScript language in students' choice of text or block-based code format. Students will design projects of increasing complexity related to animation and interactive game objects based on their interests. Students will learn how to use variables and control structures in JavaScript to implement, test, and troubleshoot their designs. The online platform students will use is available from anywhere and has a wide variety of well-vetted and high quality images, sound effects, and example projects for students to use to enhance their own projects as they progress through the course.

MS Networking and Cybersecurity

STEMMS109

Semester long course	8th	N/A	Requires Computer Science 2
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In Introduction to Networking and Cyber Security, students will learn a wide gamut of IT skills such as the basics of networking and network security, operating system troubleshooting, scripting, cyberethics and safety. In addition to the technical skills, students will be learning the soft skills necessary to effectively communicate in the digital age and assess risks. Lastly, students will learn about what cyber careers are available. This course requires completion of MS Computer Science I and MS Computer Science II.

-OR-

MS Pi's and Python

STEMMS1012

Semester long course	8th	N/A	Requires Computer Science 2
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This semester-long course is open to 8th graders, who are interested in working with Linux, open source, and the Raspberry Pi. We will endeavor to develop real world system skills through building Pi based projects, learning virtualization and operating system concepts while applying that knowledge through bash and python scripts to the Internet of Things. Please note this will be a very hands-on course, you will be required to work in teams for some of the projects.

Engineering

****Note:** At least one semester of Engineering is **required** each year.

Engineering 1

STEMMS216

Semester long course	6th- 8th	N/A	N/A
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This is a hands-on inquiry based and project driven class. Students will learn how to utilize the Engineering Design Process, the process of engineering, to design and build their projects. While learning about different materials and processes, students will also learn how to safely choose and operate the correct tool or machine for the job at hand. Students will learn to document their projects and solutions in an Engineering Notebook, and produce a presentation for each project.

Engineering 2

STEMMS217

Semester long course	6th- 8th	N/A	N/A
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This is a hands-on inquiry based and problem/project driven class. Students will learn how to utilize the Engineering Design Process, critical thinking, and problem solving skills, to design and build projects. While learning about different materials and processes, students will also learn how to safely choose and operate the correct tool or machine for the job at hand. Students will learn to document their projects and solutions in an Engineering Notebook, and produce a presentation for each project. Students will learn about technical sketching and drawing, how to apply mathematical principles to their design, and then use various tools and materials to bring their 3D projects to life. Projects may include, but are not limited to: Simple Machines and mechanisms, Mousetrap and Rubber band powered vehicles, Catapults, and CO2 Dragsters

Engineering 3

STEMMS218

Semester long course	6th-8th	N/A	N/A
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Students will learn about technical sketching and drawing, how to apply mathematical principles to their design, and then use various tools and materials to bring their 3D projects to life. This is a hands-on inquiry based and problem/project driven class. Students will learn how to utilize the Engineering Design Process, critical thinking, and problem solving skills, to design and build projects. While learning about different materials and processes, students will also learn how to safely choose and operate the correct tool or machine for the job at hand. Students will learn to document their projects and solutions in an Engineering Notebook, and produce a presentation for each project.

TSA (Technology Student Association)

STEMMS2110

Year long course	7th-8th	TBD	N/A
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Students will learn about technical sketching and drawing, how to apply mathematical principles to their design, and then use various tools and materials to bring their 3D projects to life. This is a hands-on inquiry based and problem/project driven class. Students will learn how to utilize the Engineering Design Process, critical thinking, and students will also learn how to safely choose and operate the correct tool or machine for the job at hand. Students will learn to document their projects and solutions in an Engineering Notebook, and produce a presentation for each project. problem solving skills, to design and build projects. While learning about different materials and processes.

Intro to Robotics

STEMMS219

Semester long course	6th-8th	N/A	N/A
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Students will learn to program, design and build a robot to meet specific challenges using the VEX IQ system, with a strong emphasis on use of sensors and autonomous movement. Students will work in partners and be expected to collaborate, as well as share ideas and methods with other groups. Most challenges will be based on the VEX IQ STEM Labs and competitions. This is a great preparation for entry in First or BEST robotics.

MS Best Robotics

STEMMS2112

Semester long course	7th-8th	N/A	Must complete Intro to Robotics
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Students will continue development of more advanced robotic concepts by designing, building and programming a robot to meet BEST robotics challenges and competitions. Students will learn basic fabrication and work on customized designs and builds. Students will work in groups and be expected to collaborate, as well as share ideas and methods with other groups. This class will have a greater focus on developing text-based coding skills for robotic programming, such as Python and C++.

Physical Education

6th Grade Physical Education

STEMMS086

Semester long course	6th	N/A	N/A
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This two component class includes physical education and health. In physical education, students have the opportunity for physical development in the areas of strength, flexibility, coordination, endurance, balance, agility, range of motion, and power. Students are introduced to the fundamentals of team and individual sports, which include skills, rules, and game strategy. This diverse program allows students the opportunity to develop individual skills and to be introduced to new, enjoyable experiences for lifelong physical fitness and well-being.

The health curriculum content provides students with the information needed to make healthy decisions.

Middle School Physical Education

STEMMS087

Semester long course	7th-8th	N/A	N/A
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This two component class includes physical education and health. In physical education, students have the opportunity for physical development in the areas of strength, flexibility, coordination, endurance, balance, agility, range of motion, and power. Students are introduced to the fundamentals of team and individual sports, which include skills, rules, and game strategy. This diverse program allows students the opportunity to develop individual skills and to be introduced to new, enjoyable experiences for lifelong physical fitness and well-being. The health curriculum content provides students with the information needed to make healthy decisions.

Sports and Games

STEMMS090

Semester long course	6th-8th	N/A	N/A
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Concentrates on the different skills, rules and strategies of individual and team sports/games. Teamwork and competition are emphasized. Students will learn the skills necessary to play each sport/game, rules and terminology associated with the sport/game and offensive/defensive strategies peculiar to the sport/game. Sportsmanship and competitiveness are learned and practiced, along with leadership.

MS Health 1- Mind and Body

STEMMS088

Semester long course	6th-8th	N/A	N/A
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This course is an introduction to health and is a prerequisite to Teenage Wellness. Topics include an introduction to health and the concepts of advocacy, hygiene, prevention, relationships and interpersonal skills, conflict management, expressing difficult feelings, boundary setting, seeking help, pro-social behaviors, bullying, suicide awareness and personal safety.

MS Health 2- Teenage Wellness

STEMMS089

Semester long course	6th-8th	N/A	Health 1 or MS Health
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This course will cover mental and emotional health topics such as anxiety, depression, mood disorders, body image, eating disorders, sleep disorders, and stress; sexual health including topics such as romantic relationships, sexual abstinence, sexual violence, reproductive systems, STD's, and unintended pregnancy. The course addresses drugs, tobacco and alcohol topics such as illegal drugs, prescription drugs, alcohol, tobacco, community resources and related laws.

World Language

*Any 8th graders new to World Language will be placed in Level 1 not Level 1A. 8th graders also have the option of taking American Sign Language 1 as their foreign language.

French 1A

STEMMS066FS1/S2

Year long course	6th - 7th	N/A	N/A
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Students will learn the basic skills of speaking, listening, reading and writings as well as cultural information. Students will study present, future and past tense verb conjugations, vocabulary, gender of nouns, adjective use and sentence structure. This course is designed to present students with the solid knowledge base

necessary at intermediate and advanced language levels.

French 1B

STEMMS067FS1/S2

Year long course	7th-8th	N/A	French 1A
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Students will continue to learn the grammatical structures, which will allow them to communicate on a simple level in the foreign language. The students will begin to use the past tense and talk and write about events that have already happened. The study of vocabulary continues to be of utmost importance through all levels of language study. Students will practice all skills through speaking, reading, writing, and listening.

Spanish 1A

STEMMS066SS1/S2

Year long course	6th - 7th	N/A	N/A
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This course will prepare students to speak, read, write, and listen in the chosen language as well as learning cultural information. Students will study simple grammar structure, which includes present tense verb conjugations, gender of nouns, adjectives use and sentence structure. All skills will be practiced through speaking, writing, listening and reading.

Spanish 1B

STEMMS067SS1/S2

Year long course	7th-8th	N/A	Spanish 1A
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Students will continue to learn the grammatical structures that will allow them to communicate on a simple level in the foreign language. The students will begin to use the past tense and talk and write about events that have already happened. The study of vocabulary continues to be of utmost importance through all the levels of language study. Students will practice all skills through speaking, reading, writing and listening.

Fine Arts

6th Grade Art

STEMMS056

Semester long course	6th	N/A	N/A
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The class will focus on using mixed media to create works of art. Mixed media is essentially the use of two or more art mediums in a single work of art. Students will experiment with charcoal, pencil, paint, printmaking and collage. Emphasis will be placed on risk taking in art making and experimentation. Class discussions will be held on the history of art and art as a form of self-expression.

7th Grade Art

STEMMS057

Semester long course	7th	N/A	N/A
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The class will begin with observational drawing skills and techniques. As we progress we will include painting techniques. The major emphasis of the class focuses on the skills and knowledge required to draw well. We will build on those skills and explore creative and inventive ways to express ourselves using drawing and painting mediums. Students will learn the history of drawing and painting, and discuss how society influences art and how art is used as visual communication.

8th Grade Art

STEMMS058

Semester long course	8th	N/A	N/A
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Students will explore the mediums of painting, drawing, sculpture, graphic design and digital photography. The course is designed as an introduction to the high school curriculum. As with all art classes at STEM, Creativity, problem solving and experimentation are areas of focus. Students will use the elements and principles of design to analyze and evaluate their work and the work of their peers, research historical art and create visual forms of self-expression.

MS Theater I

STEMMS226

Semester long course	6th-8th	N/A	N/A
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A comprehensive beginning theater class. The purpose of the course is to give students an overview of Theater in general. We learn the tools of theater in mind, body, and voice which include the following: Scene work, monologues, improvisation, and pantomime. Major emphasis of the class is on developing beginning acting skills, teamwork, and self esteem.

MS Theater II

STEMMS229

Semester long course	6th-8th	N/A	Must have completed MS Theater I
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Theater II helps students develop experience and skill in one or more aspects of theatrical production. Advanced courses concentrate on extending and refining dramatic technique, by expanding students' exposure to different types of theatrical techniques and traditions and increasing their participation in public productions. Theater II Curriculum is performance based. It has been developed to expand and deepen the students' skills as an artist. They will do so by building on material covered in Theater I curriculum, with units in: Character Analysis, Monologue Analysis, and writing, Shakespeare Performance, and Design. The curriculum will culminate in a performance.

MS Theater Tech

STEMMS231

Semester long course	6th-8th	N/A	N/A- this course can be repeated
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Drama is a discipline that requires collaboration, visioning, compromising, leading, and following. Without all these moving parts, it doesn't work. That's why technical theater is important: it is the unsung hero of our industry, where the actors and directors are celebrated. How can a solid, holistic drama program exist if all members do not experience all the moving parts?

Technical theater will give you the opportunity to introduce lighting, sound, costuming, staging, stage management, and makeup into our program.

The great thing about this class is that it gives an opportunity for those who are not interested in performing an opportunity to be in the theater - behind the scenes.

MS Theater Performance

STEMMS230

Semester long course	7th-8th	N/A	MS Theater I and II
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Theater Performance courses provide students with experience and skill development in one or more aspects of theatrical production, by allowing them to concentrate on acting and performance skills. Introductory courses explore fundamentals, while advanced courses extend and refine technique, expand students' exposure to different types of theatrical craft and traditions, and increase their participation in public productions.

Beginning Band

STEMMS0521S1/S2

Year long course	6th-8th	N/A	Audition for appropriate placement is required Student must have own instrument
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This year-long course is an introduction to performing music in the concert band setting for students with limited or no musical experience. This is a great follow-up course to the Fundamentals of Music class. **Instruments taught in this course are flute, clarinet, trumpet, trombone, baritone, saxophone, and percussion (bell kit and snare drum)**, which can be expanded on in subsequent advanced instrumental band ensembles. STEM does not supply instruments but our instructor will help you determine the best option for obtaining the required materials before the year begins. Instrument maintenance, playing technique, and musical theory are all taught as you perform a variety of music with a group. We will perform as a band during concerts throughout the year.

MS Intermediate Band

STEMMS0522S1/S2

Year long course	6th-8th	N/A	Audition for appropriate placement is required Student must have own instrument
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This year-long repeatable course is the intermediary between STEM's Beginner Band and Concert Band Ensembles. We will perform classical transcriptions and arrangements of popular music for multiple concerts and school events. Members must be able to perform three-four major scales of their choice with characteristic tone, a portion of the chromatic scale, and sightread notated music that feature rhythms such as half notes, quarter notes, quarter rests, and eighth notes. **Instrumentation for Intermediate Band is flute, clarinet, trumpet, trombone, baritone, saxophone(s) (alto and/or tenor), tuba, and french horn, percussion (Snare, Bass drum, Keys, Aux).**

MS Concert Band

STEMMS0522S1/S2

Year long course	6th-8th	N/A	Audition for appropriate placement is required Student must have own instrument
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This year-long repeatable course is the Advanced Band Ensemble. **Instrumentation for this Band ensemble is: flute, clarinet, trumpet, trombone, baritone, saxophone(s) (altos, tenor, baritone), euphonium, tuba, piccolo, french horn and percussion (Snare drum, Bass Drum, Bell kit and Auxiliary percussion).** We will perform classical transcriptions and arrangements of popular music for multiple concerts and school events. Members must be able to perform six or more major scales of their choice with a characteristic tone, a portion of the chromatic scale, and sightread notated music that feature rhythms such as half notes, quarter notes, quarter rests, and eighth notes, eighth rest sixteenth notes, dotted half and dotted quarter and dotted 8th notes.

MS Orchestra

STEMMS0520S1/S2

Year long course	6th-8th	N/A	Audition for appropriate placement is required Student must have own instrument
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This year-long repeatable course is a large String Ensemble. They will perform classical transcriptions and arrangements of popular music for multiple concerts and school events. Members must be able to perform four or more major scales of their choice with correct intonation, a portion of the chromatic scale, and sightread notated music that feature rhythms such as half notes, quarter notes, quarter rests, and eighth notes, eighth rest sixteenth notes Doted half and dotted quarter and dotted 8th notes. Instrumentation for this String ensemble is: Violin, Viola, Cello, Double Bass

Choir

STEMMS0515S1/S2

Semester long course	6th-8th	N/A	N/A
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- Students learn proper breath support and vocal production
- Students perform at concerts and events
- Students learn to read music as it applies to vocal scores
- Students write, produce and perform an original musical

MS Music Fundamentals

STEMMS0513

Semester long course	6th-8th	N/A	N/A
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This semester-long repeatable course will cover music appreciation, music history, and basic music theory. We will cover how to read and write musical notation along with musical harmony to help deepen the understanding of how rhythm, pitch, dynamics, tempo, and timbre develop the melody, harmony, and form when creating music. Hopefully leading to musical exploration with the use of singing, key instruments, string instruments, wind instrument instruments, and technology. This class will provide a strong foundation for the second semester music production class.

MS Music Production

STEMMS0514

Semester long course	6th-8th	N/A	MS Music Fundamentals is required
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This advanced semester-long (Spring) repeatable course focuses on the application of the fundamental course's use of composition, song creation and recording using high level equipment and a cloud based recording software. Other skills built are live recording, sound design, and music theory as an avenue to self expression and creation. In order to succeed in this class, you must be able to describe/demonstrate: basic harmonic progressions, the basics of rhythmic notation, musical form (in both classical and popular styles of writing), and be able to create simple melodies vocally or instrumentally. You will produce multiple pieces of music and you will build skills that allow you to more fluently express yourself through musical creation.

General Electives

Math Explorations and Problem Solving

STEMMS0213

Semester long course	6th-8th	N/A	Student must have completed Math Course II or higher level math class
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This math elective is designed for middle school students who wish to analyze and solve challenging mathematics problems. Through this course you will have the opportunity to delve deeper into math topics not often covered in most middle and/or high school courses. The overall goal is to build an appreciation of mathematics by exploring high-level math topics while solving and analyzing national level mathematical competition problems. We will use MATHCOUNTS as our main source of problems. The open-ended curriculum allows for a student centered approach. The only requirement is that you must love math!

MS Study Hall

STEMMS221S1/S2

Semester long course	6th-8th	N/A	
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Supervised class period devoted to completing assigned class work or projects

MS Math Enrichment

STEMMS228

Semester long course	6th-8th	N/A	Placement is based on iready scores. Teacher Recommendation Required
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This is a course designed to help students who have historically struggled in their math classes. This course will provide extra support for any lagging skills, in addition to serving as a place for students to get help in their core math class.

MS English Enrichment

STEMMS227

Semester long course	6th-8th	N/A	Placement is based on iready scores. Teacher Recommendation Required
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This course is designed to help students strengthen their literacy skills. Students will work on focused reading and writing skills in small groups, as well as receive additional support on existing literacy work in all classes. Students can take the course with a teacher referral.

Courses Not Currently Offered - [Click here](#)