
REACH

CYBER CHARTER SCHOOL

COURSE CATALOG

Middle School (6-8)

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Sixth Grade

English Language Arts 6 (Year Long)

In Sixth Grade English Language students read and analyze a broad range of grade-level literature and informational texts to determine central ideas, cite textual evidence, analyze text structure, and evaluate author's purpose and perspective. Instruction strengthens vocabulary, comprehension strategies, and critical thinking through close reading, collaborative discussion, and multimedia sources. Writing workshops guide students to produce coherent argumentative, informative/explanatory, and narrative pieces with clear organization, evidence-based support, and attention to grammar and conventions. Students exit sixth grade with improved analytical reading skills and more sophisticated written expression. All Pennsylvania Core Standards for English Language Arts (Grade 6) are met in this course.

Math 6 (Year Long)

In Sixth Grade Mathematics students deepen number sense by extending operations to fractions, decimals, and rational numbers and apply proportional reasoning to ratios and rates. Instruction emphasizes algebraic thinking through expressions, equations, and using variables to represent and solve real-world problems. Geometry and measurement work includes area, surface area, and volume, while statistics and probability focus on data distributions, measures of center, and interpreting graphs. Students exit sixth grade with strengthened computational fluency, proportional reasoning, and problem-solving skills. All Pennsylvania Core Standards for Math (Grade 6) are met in this course.

Science 6 (Year Long)

In Sixth Grade Science students engage in hands-on investigations and multimedia activities to explore life science (cells, ecosystems, and organism interactions), physical science (matter, energy, and forces), and earth and space science (Earth systems, plate tectonics, and weather). Instruction emphasizes science and engineering practices—asking testable questions, planning and carrying out investigations, analyzing and interpreting data, using models, and constructing evidence-based explanations—while connecting concepts to real-world applications. By the end of sixth grade, students will apply evidence to explain patterns and systems, design simple investigations, and demonstrate grade-level reasoning and inquiry skills. All Pennsylvania Academic Standards for Science (Grade 6) are met in this course.

Social Studies 6 (Year Long)

In Sixth Grade Social Studies students explore world regions and cultures, learning geographic skills, spatial reasoning, and how physical and human systems interact. Civics instruction examines the rights and responsibilities of citizens, the functions of government, and the importance of civic participation. Economics content introduces scarcity, resources, markets, and decision-making at local and global scales. Instruction uses inquiry, primary and secondary sources, project-based learning, and family connections with formative checks, so students exit sixth grade with a foundational understanding of geography, civics, economics, and cultural perspectives. All Pennsylvania Academic Standards for Social Studies (Grade 6) are met in this course.

Seventh Grade

English Language Arts 7 (Year Long)

In Seventh Grade English Language Arts students read and analyze a wide range of grade-level literature and informational texts to determine themes and central ideas, cite strong textual evidence, and analyze how authors develop meaning and craft. Instruction deepens vocabulary, comprehension strategies, and critical thinking through close reading, Socratic discussion, and multimedia sources. Writing workshops guide students to produce well-reasoned argumentative, informative/explanatory, and narrative pieces with clear organization, credible evidence, and refined grammar and conventions. Students exit seventh grade prepared for rigorous analytical reading and effective, evidence-based writing. All Pennsylvania Core Standards for English Language Arts (Grade 7) are met in this course.

Math 7 (Year Long)

In Seventh Grade students deepen algebraic reasoning by working with proportional relationships, solving linear equations and inequalities, and applying expressions to model real-world situations. Instruction develops number sense with operations on rational numbers, builds proficiency with ratios and rates, and introduces scale drawings and proportional relationships. Geometry and statistics work include understanding angles and similarity, calculating area and volume, and analyzing proportional relationships in data and probability. Students exit seventh grade ready for more advanced algebra and geometric reasoning. All Pennsylvania Core Standards for Math (Grade 7) are met in this course.

Science 7 (Year Long)

In Seventh Grade Science students engage in hands-on investigations and multimedia activities to explore life science (organism structure and function, heredity, and ecosystems), physical science (matter, chemical and physical changes, and forces and energy), and earth and space science (Earth systems, cycles, and human impacts). Instruction emphasizes science and engineering practices—asking testable questions, designing and carrying out investigations, analyzing data, using models, and constructing evidence-based explanations—while connecting concepts to real-world problems. By the end of seventh grade, students will apply evidence to explain phenomena, evaluate cause-and-effect relationships within systems, and demonstrate grade-level inquiry and reasoning skills. All Pennsylvania Academic Standards for Science (Grade 7) are met in this course.

Social Studies 7 (Year Long)

In Seventh Grade Social Studies students examine world history and regional civilizations to understand cultural development, governmental systems, and human interactions across time. Geographic skills focus on spatial analysis, map interpretation, and how physical and human systems influence societies. Civics and economics instruction explores civic institutions, citizen responsibilities, market systems, and the impact of decisions on communities and nations. Instruction uses inquiry, primary and secondary sources, project-based learning, and formative checks so students exit seventh grade with strengthened historical thinking, geographic reasoning, and civic and economic literacy. All Pennsylvania Academic Standards for Social Studies (Grade 7) are met in this course.

Eighth Grade

English Language Arts 8 (Year Long)

In Eighth Grade English Language students read and analyze a broad range of grade-level literature and informational texts to determine themes, analyze argumentative claims, cite strong textual evidence, and evaluate how authors' choices shape meaning. Instruction strengthens academic vocabulary, close-reading strategies, and critical thinking through structured discussions, multimedia sources, and text-based writing tasks. Writing workshops guide students to produce coherent argumentative, informative/explanatory, and narrative pieces with clear organization, relevant evidence, and attention to voice, style, and conventions. Students exit eighth grade ready for high-school level analytical reading and college-and-career-ready writing. All Pennsylvania Core Standards for English Language Arts (Grade 8) are met in this course.

Pre-Algebra (Year Long)

In Pre-Algebra students formalize algebraic reasoning by learning to manipulate expressions, solve linear equations and inequalities, and work with functions and slope to model relationships. Instruction builds number sense with operations on rational numbers, introduces systems of linear equations, and connects proportional reasoning to linear models. Geometry and measurement topics include congruence, similarity, and solving problems involving area, surface area, and volume, while statistics work emphasizes interpreting scatter plots and simple linear trends. Students exit the course prepared for high-school Algebra I. All Pennsylvania Core Standards for Math (Grade 8) are met in this course.

MS Algebra I (Year Long) *

**This course is taken by accelerated 8th graders but is open to younger students if data and teacher recommendations support this placement.*

In Middle School Algebra I students deepen algebraic reasoning by working with linear expressions, equations, and inequalities, and by analyzing functions, slopes, and rates of change to model real-world situations. Instruction covers operations with rational numbers, solving and graphing linear systems, and using algebraic techniques to represent and solve problems. Geometry and algebra connections include congruence, similarity, and solving area, surface area, and volume problems using algebraic methods, while statistics work emphasize interpreting relationships in scatter plots and using linear models. Students exit prepared for high school advanced math coursework. All Pennsylvania Core Standards for Math (Grade 8) are met in this course.

Science 8 (Year Long)

In Eighth Grade Science students engage in hands-on investigations and multimedia activities to explore life science (cellular processes, genetics, and ecosystems), physical science (forces, motion, energy, and waves), and earth and space science (Earth's systems, plate tectonics, and astronomical patterns). Instruction emphasizes science and engineering practices—asking testable questions, designing and carrying out investigations, analyzing and interpreting data, using models, and constructing evidence-based explanations—while connecting concepts to real-world applications. By the end of eighth grade, students will use evidence to explain phenomena, apply foundational scientific concepts across disciplines, and demonstrate grade-level inquiry and reasoning skills. All Pennsylvania Academic Standards for Science (Grade 8) are met in this course.

Social Studies 8 (Year Long)

In Eighth Grade Social Studies students study United States history with emphasis on key events, ideas, and movements that shaped the nation, while developing historical thinking skills such as sourcing, corroboration, and chronology. Geographic analysis explores how location, resources, and environment influenced historical developments and contemporary issues. Civics and economics instruction examines the foundations of American government, civic responsibilities, and economic principles that affect communities and policy decisions. Instruction uses inquiry, primary and secondary sources, and formative checks so students exit eighth grade with strengthened historical reasoning, civic understanding, and geographic literacy. All Pennsylvania Academic Standards for Social Studies (Grade 8) are met in this course.

Middle School Encore Courses (required)

6th Grade:

Art 6 (Half Year)

In Sixth Grade Art students are introduced to 2D art-making techniques. Learners examine design principles and refine details—such as line, texture, and composition—to strengthen visual storytelling and craftsmanship. Through guided study of art styles and genres, students explore historical and contemporary movements to inform their own creative choices. Digital art units teach basic tools and workflows for creating images, manipulating photographs, and combining traditional and digital techniques.

Health and Physical Education 6 (Half Year)

In the Sixth Grade Health and Physical Education course students will define health and explore the interconnected aspects of physical, social, mental, and emotional health. Students will focus on factors that impact their health choices and explore skills to make healthy choices that will positively impact their overall health and wellness.

Educational Technology 6 (Half Year)

The Sixth Grade Educational Technology course teaches students essential digital etiquette and online safety skills, emphasizing respectful communication, privacy protection, and responsible behavior in digital spaces. Learners explore the differences between hardware and software, gaining hands-on familiarity with devices, operating systems, and common applications. Introductory coding lessons build computational thinking as students learn basic programming concepts and create simple projects. Units on creating online content guide students through planning, producing, and publishing responsible multimedia—such as blogs, videos, and digital portfolios.

STEM 6 (Half Year)

In the Sixth Grade STEM course, students explore the relationship between engineering and technology. Students will learn about the nature of technology and problem solving, including the engineering design process, experimentation, innovation, and invention. Students participate in engineering-design activities to understand how criteria, constraints, and processes affect designs. Students will learn how technology, innovation, design, and engineering are interrelated and interdependent.

7th Grade:

Art 7 (Half Year)

The Art 7 course explores the connections between music, visual culture, and graphic arts, introducing students to key movements and milestones through art history. Students learn to analyze and critique works of art and music, using respectful, evidence-based language to discuss form, context, and meaning. A museum studies unit teaches students how exhibitions are curated, preserved, and interpreted, including virtual and field-trip visits when possible. By course end, students will demonstrate informed critical thinking, creative design skills, and an appreciation for how music and visual arts shape cultural narratives.

Health and Physical Education 7 (Half Year)

In Seventh grade Health and Physical Education, students will define health and explore the interconnected aspects of physical, social, mental, and emotional health. Students will then focus on setting and achieving a personal health goal. Through the course, students will explore ways to improve all aspects of their health and fitness.

Educational Technology 7 (Half Year)

The Educational Technology 7 course centers on online safety and responsible digital citizenship, teaching students how to protect privacy, evaluate sources, and communicate ethically online. Learners use a range of tools for creating content—such as video editors, graphic design apps, and collaborative platforms—to plan and produce multimedia projects. Units on recent technology advancements introduce emerging tools and trends, encouraging students to consider impacts on society and future careers. The design process is practiced through iterative project work, from research and prototyping to testing and reflection. Introductory coding lessons and instruction in basic productivity software round out the curriculum so students can build functional digital solutions and manage projects efficiently.

STEM 7 (Half Year)

In the Seventh grade STEM course, students are provided with opportunities to apply the design process in the invention or innovation of a new product, process, or system. In this course, students learn all about Technology Systems. They have opportunities to study the history of inventions and innovations, including their impacts on society. They learn about the core concepts of technology and about the various approaches to solving problems, including engineering design and experimentation. Finally, students learn about how various inventions and innovations impact their lives.

8th Grade:

Art 8 (Half Year)

In the Art 8 course students build upon the foundations developed in Art 6 & 7. This course also combines facets of art career exploration, 21st-century arts, animation, and common themes in art. Students will explore common art themes such as daily life, historical moments, nature, people, and more. Students will also gain awareness of the importance of 21st-century art skills.

Health and Physical Education 8 (Half Year)

The Health and Physical Education 8 course explores the connections between your physical, mental, and social health. Learn how to promote better health by decreasing stress and finding a fuller vision for your life through lifestyle choices, interactions with others, healthcare, and making sensible dietary choices. Build your plan to ensure your overall health, happiness, and well-being.

Educational Technology 8 (Half Year)

The Educational Technology 8 course builds strong foundations in digital citizenship and online safety, teaching students how to protect privacy, recognize reliable sources, and behave ethically in online communities. Students develop digital literacy skills by evaluating media, using productivity tools, and learning effective search and verification strategies. Lessons on copyright and intellectual property teach lawful, ethical use of digital resources and proper attribution. Introductory coding and computer science concepts empower students to design, prototype, and debug simple programs.

STEM 8 (Half Year)

In the Eighth grade STEM course, students engage in an integrated, interdisciplinary, and student-centered approach to learning that fosters curiosity, creativity, and artistic expression. Through hands-on projects and collaborative challenges, students explore the interconnected Technology Systems of new products, processes, and innovations. Emphasizing problem-solving, critical thinking, and design thinking, the course encourages students to apply computational and data-informed decision-making skills.

Middle School Elective Courses (optional)

Spanish Beginner (Year Long)

Students will immerse themselves in the beauty of the Spanish language and the richness of its diverse cultures. In the beginning Spanish course, students will learn basic grammar and vocabulary skills to help build their fluency and language proficiency. They will explore the culture of Spanish-speaking countries through engaging interactive games, videos, and audio recordings and apply what they learn through written practice, listening, and speaking exercises.

Spanish Intermediate (Year Long)

Intermediate Spanish students will build upon their knowledge from their previous Spanish class(es). They will continue to learn about Spanish and Hispanic culture as well as conversing about families, jobs, nationalities, hobbies, free time, routines, and much more. This class focuses on building fluency in Spanish vocabulary, grammar, writing, and speaking.

Advanced Spanish (Year Long)

In Advanced Spanish students will strengthen their knowledge of the Spanish language through a look at their own lives. By studying familiar things, like where they live and their daily routines, students can apply their knowledge of the Spanish language to everyday life.

Explore Computer Science MS (Year Long)

The Explore Computer Science course introduces students to computer science through exploration of engaging and accessible topics. Students will gain a fundamental understanding of the history and operation of computers, programming, game design, physical computing, cybersecurity, and web design. Students will also be introduced to potential careers and will examine societal and ethical issues of computing. The Explore Computer Science course is designed for complete beginners with no previous background in computer science. The course is highly visual, dynamic, and interactive, making it engaging for those new to computer science.

Python with Microbit (Year Long)

The Introduction to Programming with Tracy and micro bit course merges the Physical Computing with micro bit and the Introduction to Python with Tracy courses. Students learn the prerequisite programming knowledge with Tracy and then apply these concepts to physical computing with the micro bit.

Exploring Music (Year Long)

In this course, students learn about how we listen to music and how it affects our lives. Students enhance their music appreciation through the study of essential elements of music, different musical genres, various instruments, and music composition. They will also study the history and culture of music over the years.