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# REACH

CYBER CHARTER SCHOOL

*COURSE CATALOG*

**Elementary (K-5)**

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# Table of Contents

Kindergarten .....	2
First Grade .....	3
Second Grade .....	4
Third Grade .....	5
Fourth Grade.....	6
Fifth Grade .....	7
Elementary Encore .....	8
Elementary Electives .....	9

# Kindergarten

## English Language Arts K (Year Long)

In Kindergarten English Language Arts students build foundational skills in listening, speaking, phonological awareness, print concepts, phonics, fluency, vocabulary, comprehension, and emergent writing. Instruction is multisensory and includes daily routines like read-alouds, phonics mini-lessons, guided reading, and writing workshop, with family-engaged practice and supports for English learners and students with special needs. By year's end, students will read emergent texts with increasing accuracy and comprehension, demonstrate foundational phonics and phonological skills, and produce emergent writing that conveys ideas. All Pennsylvania Core Standards for English Language Arts (Grade K) are met in this course.

## Math K (Year Long)

In Kindergarten Mathematics students are introduced to foundational number sense, geometry, measurement, and early algebraic thinking. Students build number fluency through counting, one-to-one correspondence, composing and decomposing numbers to 19, and informal addition and subtraction within 10. Instruction includes hands-on, visual, and digital activities that develop spatial reasoning by identifying, comparing, composing, and creating two- and three-dimensional shapes. Measurement and data skills focus on comparing attributes (length, weight, capacity, area), classifying objects, and counting items in categories to describe and represent quantities. Ongoing formative checks and standards-based assessments monitor progress, so students exit kindergarten with a solid foundation in number sense, shape recognition, measurement concepts, and problem-solving strategies. All Pennsylvania Core Standards for Math (Grade K) are met in this course.

## Science K (Year Long)

In Kindergarten Science students are introduced to observing, questioning, and exploring the natural and designed world. Students engage in hands-on investigations and multimedia activities to develop foundational concepts in life science (needs of plants and animals), physical science (motion, forces, sound, and changes in matter), and earth and space science (seasonal patterns, weather, and natural resources). Instruction emphasizes science practices—asking questions, planning and carrying out simple investigations, using models, and communicating findings—while highlighting the roles of diverse scientists and engineers. By the end of kindergarten, students will describe observable phenomena, sort and compare objects by attributes, and demonstrate curiosity and basic investigational skills consistent with PA K–2 science expectations. All Pennsylvania Academic Standards for Science (Grade K) are met in this course.

## Social Studies K (Year Long)

In Kindergarten Social Studies students are introduced to community, civic life, geography, economics, and history. Students learn about roles and responsibilities in families and classroom communities, recognizing rules, symbols, and ways people work together. Instruction develops geographic awareness through map skills, spatial vocabulary, and exploration of local places and landmarks. Basic economic concepts focus on needs versus wants, jobs people do, and making simple choices. Lessons use inquiry, hands-on activities, family connections, and formative checks so students leave kindergarten with a beginning understanding of community, civic participation, and place-based awareness. All Pennsylvania Academic Standards for Social Studies (Grade K) are met in this course.

# First Grade

## English Language Arts 1 (Year Long)

In First Grade English Language Arts students build on foundational literacy skills. Students strengthen phonics and word recognition while developing fluency through guided oral reading, high-frequency word study, and connected text practice. Instruction advances comprehension and vocabulary by teaching story elements, asking and answering text-based questions, and using illustrations and context to determine word meanings. Emergent writing instruction guides students to compose opinion, informative, and narrative pieces using drawing, dictation, and early conventions, with opportunities for revision and sharing. Ongoing formative assessments and standards-based reporting track progress so students exit first grade with improved decoding, comprehension, vocabulary, and beginning writing skills. All Pennsylvania Core Standards for English Language Arts (Grade 1) are met in this course.

## Math 1 (Year Long)

In First Grade Mathematics students deepen number sense by extending counting to 120, understanding place value (tens and ones), and using strategies for addition and subtraction within 20. Instruction builds fluency with basic facts, solves word problems using drawings and equations, and introduces the foundations of measurement, time (to the hour and half-hour), and money (penny, nickel, dime, quarter). Geometry and spatial reasoning focus on composing and decomposing two- and three-dimensional shapes and understanding whole-part relationships. Ongoing formative checks and standards-based assessments monitor progress, so students leave first grade with strengthened computation skills, problem-solving strategies, and conceptual understanding of foundational mathematical ideas. All Pennsylvania Core Standards for Math (Grade 1) are met in this course.

## Science 1 (Year Long)

In First Grade Science students engage in hands-on investigations and multimedia activities to explore life science (plant and animal life cycles and habitats), physical science (properties of materials, light, sound, and basic forces), and earth and space science (weather patterns, seasonal changes, and natural resources). Instruction emphasizes science and engineering practices—asking questions, planning simple investigations, making observations, using models, and communicating results—while introducing evidence-based explanations. By year’s end, students will describe observable phenomena, sort and compare objects by attributes, and demonstrate basic investigation skills. All Pennsylvania Academic Standards for Science (Grade 1) are met in this course.

## Social Studies 1 (Year Long)

In First Grade Social Studies students explore community roles and civic responsibilities, learn how rules and laws help people work together, and identify local leaders and symbols. Geographic skills focus on map use, spatial vocabulary, and comparing places near and far, while basic economic ideas address needs versus wants, goods and services, and simple decision-making. Historical thinking introduces timelines, family histories, and how traditions connect to community identity. Instruction uses inquiry, hands-on activities, and family connections with formative checks, so students leave first grade with a foundational understanding of community, citizenship, geography, economics, and history. All Pennsylvania Academic Standards for Social Studies (Grade 1) are met in this course.

# Second Grade

## English Language Arts 2 (Year Long)

In Second Grade English Language Arts students build fluent decoding and word-analysis skills while expanding vocabulary and reading accuracy through guided reading, phonics work, and exposure to a range of fiction and informational texts. Instruction develops deeper comprehension strategies—summarizing, identifying main ideas and key details, making inferences, and using text evidence—as well as skills in comparing texts and distinguishing point of view. Writing instruction guides students to produce clear opinions, informative/explanatory, and narrative pieces with supporting details, logical sequencing, and improving conventions through revision and editing. All Pennsylvania Core Standards for English Language Arts (Grade 2) are met in this course.

## Math 2 (Year Long)

In Second Grade Mathematics students deepen number sense by mastering place value to 100, using strategies for addition and subtraction within 100, and understanding even and odd numbers. Instruction develops fluency with basic facts, problem-solving using models and equations, and foundations of multiplication as equal groups and repeated addition. Geometry, measurement, and data work focus on classifying shapes, measuring lengths with standard units, telling time to the nearest five minutes, and representing data with simple graphs. Students exit second grade with strengthened computation skills, conceptual understanding, and problem-solving strategies. All Pennsylvania Core Standards for Math (Grade 2) are met in this course.

## Science 2 (Year Long)

In Second Grade Science students engage in hands-on investigations and multimedia activities to explore life science (plant and animal life cycles and habitats), physical science (matter, forces, and energy), and earth and space science (weather, seasonal patterns, and Earth's resources). Instruction emphasizes science practices—asking questions, planning and carrying out simple investigations, collecting and interpreting data, and communicating findings—while introducing evidence-based explanations. By the end of second grade, students will describe observable patterns, classify and compare objects and organisms by attributes, and apply basic investigational skills. All Pennsylvania Academic Standards for Science (Grade 2) are met in this course.

## Social Studies 2 (Year Long)

In Second Grade Social Studies students explore community roles, neighborhood helpers, and civic responsibilities while learning how rules and laws support cooperation and fairness. Geographic skills focus on map use, spatial vocabulary, and comparing local places and landmarks to locations farther away. Basic economic concepts introduce needs versus wants, choices, goods and services, and the roles people play in the local economy. Instruction uses inquiry, hands-on activities, family connections, and formative checks so students exit second grade with a beginning understanding of community, geography, civics, and simple economic reasoning. All Pennsylvania Academic Standards for Social Studies (Grade 2) are met in this course.

# Third Grade

## English Language Arts 3 (Year Long)

In Third Grade English Language Arts students strengthen fluent reading with accuracy and expression while tackling a wider range of complex fiction and informational texts to build comprehension. Instruction emphasizes citing text evidence, determining main ideas and supporting details, making inferences, and analyzing character, plot, and author's purpose. Writing workshops guide students to produce organized opinions, informative/explanatory, and narrative pieces with clear introductions, supporting details, and revision for conventions. Ongoing formative assessments and standards-based reporting monitor progress so students leave third grade with increased independence in reading comprehension, critical thinking, and grade-appropriate writing skills. All Pennsylvania Core Standards for English Language Arts (Grade 3) are met in this course.

## Math 3 (Year Long)

In Third Grade Mathematics students extend number sense by developing fluency with multiplication and division within basic facts, understanding place value to 1,000, and using strategies for multi-digit arithmetic. Instruction emphasizes problem solving with fractions (understanding unit fractions and using them on number lines), measurement (area and perimeter), and data representation using graphs. Geometry work focuses on classifying shapes by attributes, understanding angles, and describing spatial relationships. Students exit third grade with stronger computational fluency, fractional reasoning, and problem-solving skills. All Pennsylvania Core Standards for Math (Grade 3) are met in this course.

## Science 3 (Year Long)

In Third Grade Science students engage in hands-on investigations and multimedia activities to explore life science (ecosystems, plant and animal adaptations), physical science (forces, motion, and properties of matter), and earth and space science (weather, the water cycle, and Earth's resources). Instruction emphasizes science and engineering practices—asking testable questions, planning and carrying out investigations, analyzing data, using models, and communicating evidence-based explanations. By the end of third grade, students will identify patterns, classify organisms and materials by observable attributes, and apply basic investigational and reasoning skills. All Pennsylvania Academic Standards for Science (Grade 3) are met in this course.

## Social Studies 3 (Year Long)

In Third Grade Social Studies students investigate local communities, regional geography, and how people use natural resources while learning map skills and spatial vocabulary. Civics instruction focuses on roles and responsibilities of community members, rules and laws, and identifying local leaders and symbols. Basic economic concepts include producers and consumers, goods and services, and making informed choices. Lessons use inquiry, hands-on activities, family connections, and formative checks so students exit third grade with a foundational understanding of community, geography, civics, and economics. All Pennsylvania Academic Standards for Social Studies (Grade 3) are met in this course.

# Fourth Grade

## English Language Arts 4 (Year Long)

In Fourth Grade English Language Arts students read and analyze a diverse range of grade-level literature and informational texts to determine main ideas, cite textual evidence, and explain how key details support central points. Instruction deepens vocabulary knowledge, comprehension strategies, and critical thinking through text-based discussions, close reading, and multimedia resources. Writing instruction focuses on producing coherent opinion, informative/explanatory, and narrative pieces with clear organization, supporting details, and attention to grammar, punctuation, and conventions. Students exit fourth grade with stronger analytical reading skills, expanded academic vocabulary, and improved written expression. All Pennsylvania Core Standards for English Language Arts (Grade 4) are met in this course.

## Math 4 (Year Long)

In Fourth Grade Mathematics students build fluency with multi-digit whole-number addition and subtraction, develop efficient strategies for multiplication and division, and deepen place value understanding to support computation. Instruction expands fraction knowledge—equivalent fractions, comparing fractions, and operations with fractions using visual models—and connects fraction concepts to decimals. Geometry and measurement work focuses on classifying shapes by properties, solving problems involving area and perimeter, and applying measurement units and conversions. Students exit fourth grade with strengthened computational skills, fractional reasoning, and problem-solving strategies. All Pennsylvania Core Standards for Math (Grade 4) are met in this course.

## Science 4 (Year Long)

In Fourth Grade Science students engage in hands-on investigations and multimedia activities to deepen understanding of life science (ecosystems, energy flow, and plant/animal structures), physical science (properties of matter, energy transfer, and simple electrical/mechanical systems), and earth and space science (Earth's systems, natural resources, and weathering/erosion). 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. By the end of fourth grade, students will explain observable patterns, describe interactions within systems, and apply basic investigation and reasoning skills. All Pennsylvania Academic Standards for Science (Grade 4) are met in this course.

## Social Studies 4 (Year Long)

In Fourth Grade Social Studies students study Pennsylvania's geography, regional communities, and natural resources while developing map skills and spatial reasoning. Civics instruction explores the roles and responsibilities of citizens, local government, and civic symbols that shape community life. Economics lessons introduce production, consumption, trade, and how people make choices that affect communities. Instruction uses inquiry, primary sources, hands-on projects, and family-connected activities with formative checks, so students leave fourth grade with a solid understanding of Pennsylvania's people, places, and civic and economic systems. All Pennsylvania Academic Standards for Social Studies (Grade 4) are met in this course.

# **Fifth Grade**

## **English Language Arts 5 (Year Long)**

In Fifth Grade English Language Arts students read and analyze diverse grade-level literature and informational texts to determine main ideas, cite text evidence, analyze structure, and evaluate authors' purpose and point of view. Instruction expands academic vocabulary and comprehension strategies through close reading, discussion, and multimedia sources to support critical thinking. Writing workshops guide students to produce clear, organized opinions, informative/explanatory, and narrative pieces with coherent structure, relevant supporting details, and attention to grammar and conventions. Students exit fifth grade ready for deeper analytical reading and more sophisticated written expression. All Pennsylvania Core Standards for English Language Arts (Grade 5) are met in this course.

## **Math 5 (Year Long)**

In Fifth Grade Mathematics students extend number sense to include operations with multi-digit whole numbers and fractions, develop efficient strategies for multiplication and division, and work with decimals to hundredths. Instruction builds proficiency with fraction operations, connects fractions and decimals, and applies numerical reasoning to solve multi-step word problems using equations and models. Geometry, measurement, and data topics include classifying shapes, calculating volume, converting measurement units, and representing/analyzing data. Students exit fifth grade with strengthened computational fluency, fractional and decimal reasoning, and flexible problem-solving skills. All Pennsylvania Core Standards for Math (Grade 5) are met in this course.

## **Science 5 (Year Long)**

In Fifth Grade Science students engage in hands-on investigations and multimedia activities to explore life science (ecosystems, energy transfer, and adaptations), physical science (matter, forces, and energy interactions), and earth and space science (Earth's systems, weather, and natural resources). Instruction emphasizes science and engineering practices—asking questions, planning and carrying out investigations, analyzing data, using models, and constructing evidence-based explanations—while connecting concepts to real-world problems. By the end of fifth grade, students will explain patterns and systems, use evidence to support explanations, and demonstrate grade-level investigation and reasoning skills. All Pennsylvania Academic Standards for Science (Grade 5) are met in this course.

## **Social Studies 5 (Year Long)**

In Fifth Grade Social Studies students study regional and national geography, map skills, and how physical and human systems shape communities. Civics instruction focuses on rights and responsibilities, the structure of government, and how citizens participate in civic life. Economics lessons explore markets, resources, trade, and decision-making at personal and community levels. Instruction uses inquiry, primary and secondary sources, project-based activities, and family connections with formative checks, so students exit fifth grade with a strong foundation in geography, civics, economics, and historical thinking. All Pennsylvania Academic Standards for Social Studies (Grade 5) are met in this course.

# Elementary Encore Courses (required)

## Art (Half Year)

In the elementary Art courses (grades K-5), students learn about the Elements of Art and Principles of Design through exploration of master artists and art techniques. Some of the module topics include line, shape, color, space, form, texture, and art in the community. During the creative process, students will apply art vocabulary and procedures, as well as time management and collaborative skills. Connections are also made to music, dance, and physical education.

## Health & Physical Education (Half Year)

Grades K-5 Physical Education courses focus on helping students develop an active lifestyle by integrating healthy habits and activities. Learning builds on previous lessons to provide developmentally appropriate activities, and builds on skills learned at each grade level. Skill progressions help students learn how to throw, catch, kick, strike, dance, swim, and perform basic gymnastics. Students also learn how to eat a healthy diet, develop teamwork and sportsmanship, and strive for 60 minutes of daily activity. They learn to set physical goals and work to meet them to keep improving their skills.

## Educational Technology (Half Year)

Each of the K-5 Educational Technology courses include practical topics like online safety (including cyber bullying), digital citizenship, and internet usage. Each course utilizes a flexible, tech-driven approach that helps students build foundational skills and encourages independent learning. Additionally, students will explore information literacy, computer fundamentals, and word processing skills. Spreadsheets, databases, and presentations are also points of emphasis throughout the elementary Educational Technology courses.

## STEM (Half Year)

The elementary STEM courses (grades K-5) give students multiple opportunities to engage with the engineering design process through a variety of lessons and activities. Additionally, students learn how to apply technology through coding and learn how scientific processes impact the world around us. Students also engage with *Smart Futures* in the STEM courses, which is a program that guides students through building career plans.

## Career Experience (Half Year)

The elementary Career Experience courses (grades K-5) include opportunities for students to explore real-life careers in areas like carpentry, oceanography, and fashion. The courses also have students engage with *Smart Futures*, a program that guides students through building career plans and portfolios and helps students collect career artifacts.

## **Elementary Elective Courses (optional)**

### **Music I (Year Long)**

In this music course, designed for kindergarten through second grade, students are introduced to the fundamental elements of music, including pitch, timbre, and texture, through singing, movement, and classroom instruments. Students explore dynamics and tempo as they learn how volume and speed shape a piece, and practice steady beat and varied rhythms to build strong rhythmic skills. Through singing and playing simple melodies, learners discover how phrases form musical sentences and how melodies develop over time. Lessons on musical form help students recognize patterns and structures in songs, while creative activities encourage composing short melodic phrases. By the end of the course, students will confidently read basic rhythmic notation, perform classroom repertoire, and express musical ideas with growing skill and creativity.

### **Music II (Year Long)**

This music course, designed for third through fifth grade, introduces students to the core elements of music—such as pitch, timbre, and texture—through singing, movement, and hands-on instrument play. Students explore melody and meter, learning to recognize musical patterns and keep a steady beat while singing and clapping. Through age-appropriate study of scales, learners build pitch awareness and begin matching sung pitches to notation. Basic music reading skills are taught so students can interpret simple rhythms and melodies from notation and perform classroom repertoire. Creative composition activities invite students to craft short melodies and combine them with learned elements to share original musical ideas. Students will also receive a recorder to learn to play.

### **Elementary Chorus (Year Long)**

Elementary Chorus is designed for students in kindergarten through fifth grade. Students will learn vocal techniques; sight singing and create virtual choir performances in the choir. If you like to sing, you will love Elementary Chorus.

### **Elementary Spanish (Year Long)**

In each of the Elementary Spanish courses (grades K-5), students will learn basic Spanish language and culture. Students will start in the Introduction to Elementary Spanish course and can work their way up through Elementary Spanish 5; continuously growing in Spanish fluency. In these classes, students will focus on high frequency vocabulary in topics such as greetings, emotions, food, clothing, animals, travel, and much more! Students will also learn basic grammar so they can start speaking and writing in Spanish. Each course takes students on educational journeys of diverse Spanish speaking countries and gives them a glimpse of the cultural aspects of those countries.