



# Cardigan Mountain School 2025 Summer Session Course Catalog



# CARDIGAN MOUNTAIN SCHOOL SUMMER SESSION COURSE CATALOG

The mission of the Cardigan Mountain School Summer Session Academic Program is to foster exploration and application of academic subjects in a fun learning environment. We strive to design and implement an engaging curriculum that piques curiosity and reinforces subject-level benchmarks. This is an opportunity for students to explore new subjects, cement foundational academic skills, and develop as lifelong learners. Students take three to five classes per day, as each class is one or two periods in length. Enjoy browsing this catalog and choosing your courses!

**WHEN CHOOSING CLASSES, PLEASE KEEP IN MIND THAT YOUR CHILD’S GRADE LEVEL FROM THE 2024-2025 SCHOOL YEAR IS THEIR GRADE DURING SUMMER SESSION.**

**Please note:** Some classes may not run based on sign-ups. We do our best to give students their first choice; however, due to circumstances beyond our control, we are not always able to do so. If you have questions, please do not hesitate to contact the Summer Session Office at 603.523.3526. You may also contact us by email at [summer@cardigan.org](mailto:summer@cardigan.org). We look forward to learning with you!

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# ARTS

## **Miracle of Clay**

2 periods / All Grades

Miracle of Clay introduces students to methods of hand building and wheel thrown techniques. The course emphasizes wheelwork, slab and pinch pot methods of construction, and the proper use of glaze application. \$

## **Woodshop**

2 periods / Grades 6 to 9

Woodshop is an introductory course that familiarizes students with good shop practices and techniques using basic hand tools and power tools. After completion of an assigned project, students are encouraged to explore their own ideas using the skills they have learned. \$

## **Drama Debut**

1 period / Grades 5 to 9

Students will put together a drama production to be performed before an audience during Summer Session. No acting experience needed, just the desire to give it a try.

## **Dance**

2 periods / All Grades

Experienced dancers and novices alike will work on the basics of jazz, ballet, and hip-hop. No dance experience needed, just the desire to give it a try.

## **Fundamentals of Drawing**

1 period / All Grades

Drawing students will work to develop and expand their skills in shading, line drawings, and compositions. They will explore different mediums, and apply their skills to still life, portraits, and outdoor drawings.

## **Explorations in Art**

2 periods / Grades 3 to 6

Explorations in Art allows students to try a variety of forms of art. The projects will be adjusted to student interest, and may include painting, charcoal, papier-mâché, etching, drawing, and other branches of art students would like to learn.

## **Mixed Medium Painting**

2 periods / All Grades

In painting, students experiment with tempera, watercolor, acrylic, and homemade paints on various surfaces. Students learn basic color theory and practice mixing their own colors while working on class-directed and self-directed projects. \$

## **Music: Create & Perform**

1 period / All Grades

Students will learn the basics of melody and form by singing and will learn some traditional camp/campfire songs from various traditions. They may also add instruments to these songs (such as hand bells, drums, or other classroom instruments). This will teach students the basics of rhythm and harmony. The last few days of class are dedicated to preparing a piece for an end-of-session performance.

*\$: This course requires an additional fee to cover the cost of supplies.*

# ARTS

## **Ukulele for Beginners**

1 period / All Grades

This course covers everything you'll need to know to start playing a ukulele, including uke anatomy, tuning, how to read chord diagrams, strumming patterns, popular chords, and chord progressions. Suitable for absolute beginners through intermediate players. \$

# SUMMER GATES

## **Overview of the Gates Innovation and Invention Program**

The Charles C. Gates Invention & Innovation Program at Cardigan is a cutting-edge educational initiative designed to inspire and challenge students to explore their passions and make meaningful contributions to society. Made possible by the generous contribution of Mrs. Diane Wallach on behalf of her father, Mr. Charles C. Gates, this program encourages students to be problem-seekers. Gates offers a space to ask questions about design and bravely seek solutions for tomorrow. Through hands-on, immersive learning experiences, students develop critical skills such as individual and collective creativity, problem-solving, empathy, and resilience. The program fosters a sense of community and individual identity, preparing students to navigate and shape an interconnected world.

**Please note:** *Due to popular demand, students may be limited to enrolling in only one class from this set of offerings.*

## **Drone Builders: Design, Build & Fly!**

Introductory Course: 1 period / Grades 3 to 6

In this hands-on introductory course, students will explore the fundamentals of drone technology by assembling and operating a basic drone. They will learn about aerodynamics, basic circuitry, and the core engineering principles that make drones fly. Through guided experimentation and problem-solving activities, students will gain foundational technical skills in a fun and engaging way. The course will conclude with a thrilling first flight test, allowing students to see their creations take off! \$

Advanced Course: 1 period / Grades 7 to 9

Designed for students with prior experience or a strong interest in drone technology, this advanced course dives deeper into the engineering behind drone flight. Participants will fly fully functional drones, exploring advanced aerodynamics, troubleshooting flight techniques, and hands-on problem-solving challenges. Students will also learn about real-world applications in fields like robotics and aerial photography. The course culminates in a high-stakes flight test, where students will design their own obstacle course, refine their piloting skills, and compete in a thrilling drone race to put their engineering expertise to the test. \$

## **Engineering & Fabrication: Invent, Create, Solve**

1 period / Grades 6 to 9

This dynamic course is perfect for young innovators who love to build, tinker, and solve real-world challenges! Students will explore engineering concepts while working with a variety of materials, including wood, metal, plastics, and electronics. Through hands-on projects, they'll develop problem-solving skills, learn fabrication techniques, and bring creative ideas to life. Whether constructing bridges, designing mechanical devices, or tackling design challenges, students will gain confidence in their ability to turn ideas into reality. \$

## **3D Printing & Design: From Imagination to Creation**

1 period / Grades 6 to 9

In this exciting course, students will bring their ideas to life using cutting-edge 3D design and printing technology! Younger students and beginners will use TinkerCAD to create fun and functional designs, while older or more experienced students will advance to Onshape for more complex projects. They'll learn the fundamentals of 3D modeling, prototyping, and problem-solving while printing their own custom creations. By the end of the course, students will walk away with hands-on experience and a tangible product they designed themselves! \$

# SUMMER GATES

## **Crunch Labs**

1 period / Grades 3 to 5

From exploring rotational energy with a disc flier to accurately predicting projectile motion with a domino catapult, students will test, play, and think like an engineer. Working in small groups, students will build an engineering toy each week from Crunch Labs while learning all about the “juicy physics” behind it. \$

## **Amusement Park 101**

2 periods / Grades 5 to 9

Amusement Park 101, based in Cardigan’s brand new state-of-the-art STEM center, will explore the engineering design process while building amusement park attractions. Students will construct paper roller coasters, motorized Ferris wheels, and a rubber band swing ride to fit out their own amusement park. \$

# ENGLISH

**Please Note:** *Classes in the English Department are not recommended for English language learners.*

## **Reader's Workshop 1**

1 period / Grades 3 to 5

Young readers wishing to strengthen their reading comprehension and vocabulary skills will use short books and stories to learn and practice active reading skills. Class discussions and written reflections will also help to improve understanding.

## **Reader's Workshop 2**

1 period / Grades 5 to 7

Middle-grade readers will strengthen their reading comprehension using short novels and stories. Students will learn and practice active reading skills. Class discussions and written reflections will also help to improve their understanding.

## **Reader's Workshop 3**

1 period / Grades 7 to 9

Older readers will use short stories and passages from a variety of genres to strengthen reading comprehension and active reading skills. Class discussions and written reflections will also help to improve their understanding.

## **Writer's Workshop 1**

1 period / Grades 3 to 5

Young writers will practice writing sentences and paragraphs that inform, persuade, and explain. They will use prewriting tactics to organize their work and will focus on sentence clarity and mechanics to communicate ideas.

## **Writer's Workshop 2**

1 period / Grades 5 to 7

Middle-grade writers will work to write the perfect paragraph and also work on essays. They will use prewriting and outlining to create cohesive work and will practice proofreading with a focus on clarity and mechanics.

## **Writer's Workshop 3**

1 period / Grades 7 to 9

Older writers will write essays that inform, persuade, and explain. They will use outlining to create cohesive, organized work and will practice proofreading with a focus on clarity and mechanics. In addition, they will learn to use MLA style citations.

## **The Art of Creative Writing**

1 period / Grades 6 to 9

Fiction writers will create fully developed and polished final products. Frequent peer review and revision will aim to improve students' use of description, exposition, narration, and characterization.

## **Introduction to Journalism**

1 period / Grades 3 to 6

Journalism students will practice gathering and analyzing information, interviewing, and writing about their summer adventures at Cardigan. Students will work collaboratively on a journalism project.

# ENGLISH

## **Stories & Poems: Seuss to Shakespeare**

1 period / Grades 3 to 6

Young storytellers who wish to express themselves in both written and oral forms will creatively write and share both fiction and non-fiction stories and poems.

## **Utopia, Gone Wrong**

1 period / Grades 6 to 8

Dystopian societies are common in many currently popular books, including *The Hunger Games*, *Divergent*, and *The Giver*, as well as in classics like *Animal Farm* and *Fahrenheit 451*. Students will read, discuss, and write about the themes prevalent in these books. (Books may change from year to year)

## **Young Adventurers**

1 period / Grades 6 to 9

Both bookworms and reluctant readers will enjoy exploring the world of young protagonists like themselves. Students will choose and read books with youth protagonists confronting the challenging issues of young adulthood. They will also be strengthening reading comprehension, studying plot development, and analyzing characters.

## **A Space Odyssey**

1 period / Grades 6 to 9

This middle school science fiction course will delve into the exciting world of imaginative future settings, where students will read and discuss classic and contemporary science fiction stories, explore themes of technology, space exploration, ethical dilemmas, and engage in creative writing activities to design their own futuristic worlds and characters.

# ESSENTIAL ACADEMIC SKILLS

**Please Note:** *EAS classes are designed to help students build and cement the skills they need to succeed scholastically. Students have the opportunity to refine their organization, handwriting, note taking, and public speaking skills through fun and engaging activities. These skills, once mastered, make learning easier and more fun!*

## **Penmanship and Notetaking**

1 period / Grades 3 to 6

In this class, students will strengthen not only their aesthetic writing skills, but also their spatial awareness and organizational skills. Projects and classroom activities will focus on identifying important words and information in text, as well as exploring different methods of organizing information to find strategies that work best for them.

## **Continuing Student Skills**

1 period / Grades 6 to 9

Students will practice different forms of note-taking, using graphic organizers, and maintaining neat and organized notes. Additionally, students will work on active reading skills, writing skills, and penmanship. This class is not recommended for English Language Learners.

## **Research and Presentation**

1 period / Grades 6 to 9

Students will learn how to find and evaluate information on a topic of their choice. They will practice skills necessary for quality research with the intention of presenting their findings in front of a live audience. Students will write and deliver a variety of speeches and discover how to foster audience engagement.

## **SSAT Prep**

2 periods / Grades 6 to 8

In this 2-period class, students will work on material and practice test-taking for both the verbal and the math portions of the SSAT.

## **Application Essays and Interview Skills**

1 period / Grades 8 to 9

Students applying to secondary schools will practice for the timed writing section of the SSAT, and learn what makes a quality SSAT essay. Students will also participate in mock interviews and learn how to confidently interview for secondary schools or summer jobs.

# MATHEMATICS

**Please note:** *Math classes are grouped according to ability and experience, not age. Prerequisites are listed in the course description, if applicable.*

## **Multiplying & Dividing**

1 period

Students will practice whole number multiplication and division through games and activities designed to help students develop a solid understanding.

## **Decimals, Fractions & Percents**

1 period

Students will be introduced to decimals, fractions, and percentages. They will learn to convert between them.

## **Operations with Fractions**

1 period

Students in Operations with Fractions will practice adding, subtracting, multiplying, dividing, and simplifying fractions. They will play games and solve puzzles designed to help them develop a solid understanding of fractions.

## **Order of Operations & Integers**

1 period

Students will learn about order of operations, integers, and rational numbers.

*Prerequisite: Ability to perform operations with fractions and decimals.*

## **Geometry Basics**

1 period

This pre-algebra-level geometry course will introduce students to perimeter, area, and volume, as well as the concepts of ratios and similarity.

*Prerequisite: Ability to perform operations with fractions and decimals.*

## **Multi-Step Equations**

1 period

Multi-Step Equations will focus on operations in algebra and solving one-step and multi-step equations.

*Prerequisite: Ability to perform operations with fractions and decimals.*

## **Word Problems and Math Riddles**

1 period

Students will work with strategies for solving pre-algebra-level word problems that require skills in patterns, decoding, volumes, surface areas, and simple equations. Math riddles will also be used to help explore alternative ways to think about mathematics.

## **Statistics and Probability**

1 period

Students will learn how to analyze data using statistics and apply the laws of probability to real life.

# MATHEMATICS

## **Linear Functions**

1 period

Linear Functions will explore the relationship between points and the equation of a line. Students will use standard form, slope-intercept form, and point-slope form to describe, compare, and graph functions.

*Prerequisite: Pre-Algebra.*

## **Systems of Equations**

1 period

Systems of Equations will focus on applying a variety of methods to solve systems of equations with two and three variables.

## **Polynomials & Quadratics**

1 period

This course is an extension of Algebra 1. Students will practice factoring and multiplying polynomials. Students will use this knowledge to then explore the characteristics of quadratic functions and their graphs and learn multiple methods to find the roots of a quadratic function.

## **Advanced Topics in Math**

1 period

This course could include work with matrices and the use of polynomials. It is appropriate for students interested in enrichment.

*Prerequisite: Completion of Algebra 1.*

## **Introduction to Computer Coding**

1 period

Using a variety of educational coding applications, students will learn how to write basic programs and tell computers what to do.

## **Advanced Computer Programming**

1 period

This course will explore topics and themes with students already possessing previous computer coding skills.

# SCIENCE

## **Science Detectives**

1 period / Grades 3 to 5

How are volcanos made? What happened to the dinosaurs? These are some of the questions young scientists will explore in this mystery-solving course. This course will teach problem-solving, observing, and forming solid conclusions based on evidence.

## **Making Things Go: On Land**

2 periods / All Grades

Calling all future engineers and kids who love cars. This is an imaginative way to study automobiles. Students will build and run mousetrap cars and Lego-mobiles, and design their own way to make and move a land-roving vehicle. In addition, students will examine and explore the future of engineering and electric cars.

## **Making Things Go: In the Air**

2 periods / All Grades

This adventure follows the history of flight from early balloon flights through modern rocketry. Students will first build tissue paper balloons that can soar hundreds of feet in the air. Then they will test paper gliders and balsa airplanes before finishing their journey by making rockets out of paper and plastic.

## **CSI: Forensics**

1 period / Grades 6 to 9

Students will learn how to document a crime scene and implicate a suspect after carrying out a variety of forensic techniques including simulated blood typing, blood spatter analysis, fingerprint analysis, glass analysis, luminol detection of simulated blood, and DNA analysis.

## **Physical Science and Motion**

2 periods / Grades 5 to 9

While collaborating in small groups, students will create models and conduct investigations using building materials such as LEGO in order to develop their understanding of physical science concepts like force and motion. They will strengthen their data analysis, critical-thinking, and presentation skills as they explore the engineering design process.

## **Wilderness Explorers**

2 periods / Grades 5 to 8

Students will explore the natural world around them by spending substantial time outside on the Cardigan campus. Students will also learn how to pitch a tent, start a fire, and survive being lost in the wilderness.

## **Advanced Topics in Science**

2 periods / Grades 6 to 9

Topics include current research, climate change, Artificial Intelligence, nutrition, and issues within biology, physics, chemistry, and other areas of student interest.

# SCIENCE

## **Physical Science in Action**

1 period / Grades 3 to 5

While collaborating in small groups, students will create models and conduct investigations using building materials such as LEGOs in order to develop their understanding of physical science concepts like force and motion. They will strengthen their data analysis, critical-thinking and presentation skills as they explore the engineering design process.

## **Newton's Laws of Motion**

1 period / Grades 6 to 9

Students will be challenged to apply and strengthen their scientific inquiry and problem-solving skills as they learn about the science involving the collision of two objects. They'll apply Sir Isaac Newton's three laws of motion by collaborating in pairs to design and construct models to test theories and optimize solutions.

# SOCIAL STUDIES

## **Greek & Roman Mythology**

1 period / Grades 3 to 6

Throughout this Greek and Roman History course, students will explore the ancient world and its most infamous gods and goddesses. This class will survey stories about the rise and fall of ancient empires and their influence on the culture, literature, and art of the modern world. Students will create a depth of knowledge in the world of mythology.

## **Ancient History**

1 period / Grades 5 to 9

Students will explore the history, geography, politics, and culture of the ancient Greek and Roman civilizations. They will learn about the history of democracy, the Olympics, Greek and Roman mythology, and other topics that have had a lasting impact on our modern world.

## **Introductory Sports Psychology**

1 period / Grades 6 to 9

In this course, students will study the minds of athletes. Students are introduced to the history, concepts, and topics of sports psychology as well as contemporary issues and practices relevant to the field. Material is introduced and evaluated through discussion, research, and collaborative presentations.

## **Travel the World in a Book**

1 period / Grades 3 to 5

Stories and books will transport young adventurers to far off places and cultures. They will read, write, and research their way across the globe and create their own stories about places they dream of visiting and the adventures they will have.

## **Global Issues and Current Events**

1 period / Grades 7 to 9

Students interested in learning about what is behind the news and participating in lively Socratic-style discussions will enjoy this class. Participants will use this engaging content to practice research skills, source analysis, and active reading.

## **Maritime Adventures**

1 period / Grades 4 to 7

Have you wanted to explore the myth and fact of famous maritime adventures? Well here is your chance as we dive into fact or fiction about some of your favorite seafarers. We will explore the exploitations of characters such as Black Beard, Davy Jones, and Francis Drake.

# WORLD LANGUAGES

**Please Note:** *Beginning classes are appropriate for students with little experience in the language, and Continuing for those who have taken one or two years. Classes include language instruction and cultural components.*

## FRENCH

**Beginning French**

**Continuing French**

## LATIN

**Beginning Latin**

**Continuing Latin**

## SPANISH

**Beginning Spanish**

**Continuing Spanish**

## JAPANESE

**Beginning Japanese**

**Continuing Japanese**

## MANDARIN

**Beginning Mandarin**

**Continuing Mandarin**

## ENGLISH AS A SECOND LANGUAGE (ESL)

**Please Note:** *Students who wish to focus on English Language studies can register for English as a Second Language (ESL). Students will be assessed on their language ability by the ESL instructors in the first week of camp then placed in the appropriate level (1, 2, or 3). These rigorous but fun courses aim to increase students' English fluency and confidence for use in academic and social settings.*

*Each course features small and highly interactive classes focused on reading, writing, speaking, listening, and study abroad preparation. These courses are designed to support students who already have some proficiency in written and spoken English as they move towards deeper mastery of the language.*

### **ESL: Reading and Vocabulary**

1 period / All grades

A wide variety of fiction and nonfiction texts will support the reading skills learned in this course. Students will practice summarizing and identifying main ideas and supporting details, scanning and skimming, forming inferences and opinions, and developing targeted vocabulary.

### **ESL: Writing and Grammar**

1 period / All grades

The focus of this course is on the improvement of expressing ideas in clear written English. Students will develop academic writing skills by becoming familiar with the standard paragraph and essay structure. Students learn and practice a variety of writing types, including, but not limited to, expository, persuasion, compare and contrast, narrative, and descriptive. Students will receive constructive feedback on both organizational and grammatical structures.

### **ESL: Voice**

1 period / All grades

Students will develop their ability to converse in classroom and social settings. Activities include conversation practices, class discussions, role-plays, interviews, presentations, and guided speaking exercises. Students are encouraged to utilize new vocabulary and sentence structures, work on pronunciation skills, and express new and challenging ideas. As a key component in any conversation, this course will also focus on listening skills.

# LEADERSHIP

## **Leadership Class**

1 period / Grades 8 to 9

Students will define their leadership styles, identify their leadership competencies, and develop their leadership practices through class simulations and real world experiences. Students will identify areas for growth in their own lives and create leadership blueprints including goals, action plans, and self-reflections. This class is open to 8th and 9th graders, and will be excellent preparation for students who choose to apply for Summer Session 2026 Student Leadership.