



ANDOVER SUMMER

**SUMMER SESSION**

*at* PHILLIPS ACADEMY

**LOWER SCHOOL INSTITUTE  
COURSE CATALOG  
SUMMER 2024**

UPDATED EDITION-NOVEMBER 2023

# ANDOVER SUMMER

## 2024 Lower School Course Catalog

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# LOWER SCHOOL OVERVIEW

Our Lower School Institute (LSI) is designed for rising 7<sup>th</sup> and 8<sup>th</sup> graders who are seeking a challenging, supportive summer academic experience. With 11 interdisciplinary course offerings, students in LSI have the opportunity to dive deeply into the rigorous study of a topic of interest, guided by nurturing teachers and residential staff in an environment that balances substantial structure with developmentally appropriate autonomy. While sharing the broader campus with their Upper School counterparts, LSI students live and study with their own middle-school-aged cohort, following a special LSI schedule that includes LSI athletics, evening classes and supervised study halls, and both academic and recreational off-campus trips. Required LSI-specific social activities are offered on campus on Tuesday and Saturday evenings.

## COURSE SELECTION

During the application process, all students select a specific program to which they are applying. For students entering grades 7 and 8, the available 5-week options are the Lower School Institute or the Lower School Institute as an English Language Learner (ELL)\*. **All students in LSI must select one interdisciplinary course** which meets daily for up to 5 hours (spread out across 3 academic periods: 2 in the morning, and one in the evening), and may add an additional, optional SSAT course or music lessons to be scheduled during their free times in the afternoons.

## ENGLISH LANGUAGE LEARNERS

English Language Learning students will be part of our specialized ELL course, Witch Hunt. Any student considering our ELL program should have basic proficiency in written and spoken English. As a guideline, students should have a minimum TOEFL iBT score of 60, 6.0 on IELTS or between a 95-100 on Duolingo.

**Please note that both boarding and day students are required to attend all class sessions and mandatory LSI activities, including cluster meetings and evening class sessions.** For local day students looking for more flexibility in commitment, we recommend exploring our 2-week Advantage program (this is offered as day-only).

In the pages that follow you will find the full range of possible LSI courses that are currently being offered for the summer of 2024. Please note that final course offerings are dependent upon enrollment and staffing, and courses with insufficient enrollment may be cancelled at any point prior to the start of the summer. Students enrolled in a course that is being cancelled will be notified and given the opportunity to enroll in an alternate course, based on what remains available at that time. **Some courses may carry additional fees for special materials, lab supplies, or academic field trips. Courses with additional fees are noted in this catalog. Fees will be added to a student's invoice after class selections are finalized.** Course enrollment is a first-come, first-served process, with our most popular courses and programs typically filling up in February or March each year. Additionally, changing public health conditions may require us to adjust our program schedule or course offerings, of which we will notify enrolled families via email and through our website.

## COURSE CHANGES

Students may utilize our Family Portal to make course changes until May 15th. Once on campus, LSI students may not make course changes except for special circumstances and with permission of corresponding instructors and the assistant director of Andover Summer. Please refer to the LSI Blue Book for more details on course changes.

## ACADEMIC ACCOMMODATIONS

Andover Summer can provide limited academic accommodations to admitted students. These accommodations may include extended time on testing, support at an evening study center. Once admitted, families should complete the required "Request for Accommodations" form and provide all necessary supporting documentation, in order to formally submit their request. All accommodations requests must be submitted by May 15, 2024.

## OPTIONAL COURSES AND ADD-ONS

Optional Courses and add-ons may be taken in may be taken in addition to the required course minimum described above. These items are not included in tuition and fees.

### **Princeton Review Test Prep—\$975**

Princeton Review courses prepare students for the verbal, quantitative, and reading comprehension sections of the SSAT standardized test used for evaluation in secondary school admissions. Students will learn efficient test-taking strategies which, alongside full-length practice tests, will help relieve test taking anxiety and allow for students to maximize their score. SSAT Prep is open to all LSI students.

### **Music Lessons—Not available during Summer 2024**

Due to the construction of our new music facility, The Falls Music Center, we will be unable to offer our summer music program this year. We apologize for this inconvenience and look forward to an expanded and an even better music program in Summer 2025.

### **Secondary School Program—NO FEE**

All LSI students are encouraged to take part in our free secondary school program, which includes a weekly workshop led by members of the Shuman Office of Admission at Andover as well as a secondary school fair. More information about the specific dates and timing of these workshops and fair will be shared upon enrollment.

A summer secondary school fair will be held on **Thursday, July 25th from 6:00-7:30 pm** and is open to all Lower School students. A list of attendees will be provided at the start of the program.



## REGULAR DAILY SCHEDULE

Summer Session — Lower School Institute (LSI)

MONDAY	
7:00-8:45 a.m.	Breakfast available ( <i>sign-in from 7:30-8:30</i> )
8:45-10:15 a.m.	Morning Class Block 1
10:20-10:40 a.m.	LSI Cluster Meeting
10:45 a.m.-12:15 p.m.	Morning Class Block 2
12:15- 1:15 p.m.	Lunch available
1:15-2:15 p.m.	Optional Secondary School Admissions Wksp
2:45-3:45 p.m.	SSAT Class Period A ( <i>for those registered</i> )
4-5 p.m.	SSAT Class Period B ( <i>for those registered</i> )
5-6 p.m.	Open Activities
5:00-6:45 p.m.	Dinner available
7:30-8:45 p.m.	Evening Class Block
8:45 p.m.	"Paresky Late Night" break
9 p.m.	Final Dorm Sign-in
9-10:15 p.m.	Free Time/Prepare for Bed
10:15-10:30 p.m.	Quiet Time
10:30 p.m.	Lights Out
TUESDAY	
7:00-8:45 a.m.	Breakfast available ( <i>sign-in from 7:30-8:30</i> )
8:45-10:15 a.m.	Morning Class Block 1
10:15-10:45 a.m.	"Milk & Cookies" break
10:45 a.m.-12:15 p.m.	Morning Class Block 2
12:00- 1:00 p.m.	Lunch available
1:15-2:15 p.m.	Afternoon Activities
2:45-3:45 p.m.	SSAT Class Period A ( <i>for those registered</i> )
4-5 p.m.	SSAT Class Period B ( <i>for those registered</i> )
5:00-6:45 p.m.	Dinner available
7:30-9:00 p.m.	LSI Social Activity ( <i>required for all</i> )
9 p.m.	Final Dorm Sign-in
10:15-10:30 p.m.	Quiet Time
10:30 p.m.	Lights Out
WEDNESDAY	
7:00-8:45 a.m.	Breakfast available ( <i>sign-in from 7:30-8:30</i> )
~8:30 a.m.-~5:00 p.m.	Academic Field Trips ( <i>timing varies by class &amp; trip</i> )
5:00-6:45 p.m.	Dinner available
7:30 p.m.	Dorm Sign-in & Meeting
7:30-8:45 p.m.	Study Hours (in dorm)
8:45-10:15 p.m.	Free Time/Prepare for Bed
10:15-10:30 p.m.	Quiet Time
10:30 p.m.	Lights Out

THURSDAY	
7:00-8:45 a.m.	Breakfast available ( <i>sign-in from 7:30-8:30</i> )
8:45-10:15 a.m.	Morning Class Block 1
10:45 a.m.-12:15 p.m.	Morning Class Block 2
12:00- 1:00 p.m.	Lunch available
1:15-2:15 p.m.	Afternoon Activities
2:45-3:45 p.m.	SSAT Class Period A ( <i>for those registered</i> )
4-5 p.m.	SSAT Class Period B ( <i>for those registered</i> )
5:00-6:45 p.m.	Dinner available
7:30-8:45 p.m.	Evening Class Block
8:45 p.m.	"Paresky Late Night" break
9 p.m.	Final Dorm Sign-in
9-10:15 p.m.	Free Time/Prepare for bed
10:15-10:30 p.m.	Quiet time
10:30 p.m.	Lights Out
FRIDAY	
7:00-8:45 a.m.	Breakfast available ( <i>sign-in from 7:30-8:30</i> )
8:45-10:15 a.m.	Morning Class Block 1
10:15-10:45 a.m.	"Milk & Cookies" break
10:45 a.m.-12:15 p.m.	Morning Class Block 2
12:00- 1:00 p.m.	Lunch available
1:15-2:15 p.m.	Afternoon Activities
2:45-3:45 p.m.	SSAT Class Period A ( <i>for those registered</i> )
4-5 p.m.	SSAT Class Period B ( <i>for those registered</i> )
5:00-6:45 p.m.	Dinner available
7:30-8:45 p.m.	Evening Class Block
9 p.m.	Final Dorm Sign-in
9-10:15 p.m.	Free Time/Prepare for bed
10:15-10:30 p.m.	Quiet time
10:30 p.m.	Lights Out
SATURDAY	
7:00-8:45 a.m.	Breakfast available ( <i>sign-in from 7:30-8:30</i> )
9:00-10:00 a.m.	Morning Class Block 1
10:30-11:30 a.m.	Morning Class Block 2
11:15 a.m.-2 p.m.	Lunch available
1-5 p.m.	LSI Social Activity ( <i>required for all</i> )
5:00-6:45 p.m.	Dinner available
7:30-10 p.m.	LSI Social Activity ( <i>optional for day students</i> )
10:15 p.m.	Dorm Sign-in
10:15-10:30 p.m.	Prepare for Bed
10:30 p.m.	Lights Out
SUNDAY	
8:30-10:30 a.m.	Breakfast available
10:30 a.m.-1:30 p.m.	Brunch available
1-6 p.m.	LSI Social activity ( <i>optional for all</i> )
5:00-6:45 p.m.	Dinner available
7:30 p.m.	Dorm Sign-in
7:30-8:45 p.m.	Study Hours (in dorm)
8:45-10:30 p.m.	Dorm Meetings & Quiet Time
10:30 p.m.	Lights Out

# LOWER SCHOOL COURSE OFFERINGS

## The Art and Physics of Flight

Grades 7 & 8

How do wings lift an airplane into the air? How do drones hover perfectly and perform acrobatic maneuvers? How can the idea of flight inspire our artistic sensibilities?

These questions and more will be tackled over our five weeks together as we investigate how unmanned aerial vehicles (UAVs) are revolutionizing countless elements of our daily lives as a dynamic and emerging technology. As we consider the big questions of the impact of UAVs, we will also set out to design, build, and operate our own UAVS to gather information and data for analysis. In addition to data collection, you will learn to navigate obstacle courses and simulated emergency situations to hone your UAV skills. Not only will you have the opportunity to engage in applied math and physics, but there will also be a chance to develop your artistic skills as well. Through daily studio time, you will explore the idea of flight to create your own pieces of art (including some that fly!) Delve into the connections between art and science and get inspired by looking at the work of contemporary and historical artists who link the two disciplines. You will build your skills in various media and benefit from increased confidence in your own artwork. Your investigations into the science behind modern planes and rockets, coupled with a chance to express yourself through art is an experience not to be missed!

*\*Please note that this course has a \$75 materials fee associated with it.*

## **NEW!** Beyond Robots: Engineering Design Lab

Grade 7 and 8

Explore the exciting world of robotics and coding in this engaging and hands-on summer course designed exclusively for middle school students. In the Lower School Institute *Beyond Robots: Engineering Design Lab* you will discover the fundamentals of robotics, including mechanical design, electronics, and sensors. You will learn to assemble and program robots using popular platforms, fostering a strong foundation in robotics technology. In addition, you will get an introduction to the basics of computer science, becoming familiar with programming languages like Scratch and Python Programming, and you use the code you write to drive the behavior of your very own robot – which you will build yourself! You will engage in a series of robotics projects, games, and challenges that encourage collaboration and problem-solving. From building a line-following robot to designing a robot that can navigate a maze or pick up and throw various items, students will gain practical experience in building and programming robots to perform specific tasks. You'll also showcase the robots and projects developed during the course in a presentation and competition at the end of the summer, as part of the annual LSI Exhibition.

*Beyond Robots* will help you understanding the basics of coding, logical thinking, and algorithmic problem-solving through fun and interactive activities – not just those limited to building and testing your robots! You'll also apply principles of engineering design to a range of scientific puzzles and challenges by working to define a problem, develop possible solutions, and then optimize your chosen design solution. You'll explore fabrication and computation, turning your design ideas into reality in the Phillips Academy Makerspace, and you will supplement your classroom learning experience with exciting field trips to witness robotics and AI in action. This is your chance – come join us to build new skills, ignite a passion for robotics and coding, and have a lot of fun along the way.

*\*Please note that this course has a \$75 materials fee associated with it.*

## **Charting the Natural World: Marine Biology Meets Math\***

*Grade 8 only\*\**

Picture yourself standing in a shallow tide pool of clear ocean water on a warm, sunny day. Hear the rhythmic crashing of the surf in the distance. Flip over a small rock and notice the teeming life beneath. Now, reach into your pocket, pull out your beaker, and scoop up a water sample. This is just one of many authentic learning experiences you'll engage in during your summer at Andover in Charting the Natural World.

In this integrated math and biology institute, you'll explore and explain the local aquatic environment. You'll learn methods of gathering and analyzing data, drawing conclusions, and communicating results. Special excursions include a visit to Boston's New England Aquarium and a trip to local tide pools for a unique opportunity to apply your knowledge of marine organisms and sampling techniques firsthand. Investigate through science. Use the power of math to analyze, solve problems, and think critically. Join us in exploring the wonders of the ocean!

*\*Please note that this course has a \$75 laboratory materials fee associated with it.*

*\*\*If possible, students should bring a Texas Instruments TI-83 or TI-84 calculator.*

## **CSI Andover: Anatomy of a Crime\***

*Grades 7 and 8*

A family—away for the weekend—has just been robbed! Neighbors awoke to the sound of shattering glass and called the police. The burglars ransacked the bedroom and stole a sack of jewelry, but their attempt to break into the safe was foiled: as police burst through the back door, the two masked suspects fled out the front door. But wait—it looks like one of the suspects tripped and hit his (or her?) head on a table. There's blood by the door! Plus, there are glass fragments to examine, fingerprints to check for, and possible footprints or tire tracks to make casts of and identify.

Crime scene investigators, grab your bags and head for Andover! Participate in blood spatter activities, stomach content analysis, toxicology experiments, entomology investigations, forensic anthropology studies, and much more. We will venture on weekly field trips and expand our investigations across Massachusetts in five fascinating weeks of forensic studies.

*\*Please note that this course has a \$75 laboratory materials fee associated with it.*

## **Dig This: Archaeology in Action**

*Grades 7 and 8*

Do you know a real archeological artifact when you see one? Can you look at a reconstructed dig and recreate the life of its original inhabitants? History is about more than reading old documents. It is an opportunity to evaluate the evidence and decide for yourself what happened. By taking a closer look at some crucial episodes in the development of this country, you will hone your skills as a historian and archeologist and will begin to understand the dynamic interactions that took place between native peoples and European newcomers, which continue to shape the United States to this day.

Using the collections at the Academy's Robert S. Peabody Museum of Archeology, together with extensive library and internet materials, students will actively explore a series of case studies. The complexity of this nation's history unfolds from the early native settlements along the Merrimack River to the English colony at Plymouth, from the witch trials at Salem to the Indian raids at Deerfield, from the wars in the west between the plains tribes and the United States army. Field trips to nearby historical sites will bring these stories alive. Character studies of key figures in these stories will help students understand the minds and strategies of important individuals from some of the most important events in United States history.



In this course students will develop their critical thinking, reading, and writing skills to interpret the past, using a combination of traditional written sources, electronic sources, and the archeological record. This is a unique opportunity to witness – and make - history.

## **Express Yourself: A Study of Performance and Creative Expression**

*Grades 7 and 8*

There are poets, performance artists, and authors in all of us. In this institute, you will experience some of the many ways that we express ourselves, as human beings and as artists. You will develop skills in close reading, observation, reflection, and communication that will allow you to interpret your life in your own uniquely artistic ways.

Beginning with a study of literature, you will consider how human beings tell their stories through dramatic and narrative texts, themes you'll then apply on stage. In the performance component, you will engage not only in the role of performer, but also as director, designer, choreographer, and critic. You will stage scripted scenes as well as your own compositions. In the literature portion of the course, you'll read and analyze famous poems, narrative texts, and plays, while also working to draft, revise, and publish your own unique works. We'll supplement our classroom experiences with visits to Boston theatres, production studios, and museums. Go ahead—express yourself!

## **Forests, Mountains, & Beaches: New England Field Ecology & Nature Writing\***

*Grades 7 and 8*

From the rocky shorelines of the Atlantic Ocean to the vistas of New Hampshire's White Mountains, the ecosystems of New England have inspired scientists and writers for hundreds of years. In this course, you will spend much of your time in the field and the laboratory, studying the habits and histories of local species of plants and animals, as well as how they interact, compete, and utilize natural resources. You will learn and apply techniques used by ecologists to collect, document, and store field data and specimens in order to gain a deeper understanding of ecological processes. Simultaneously, you will be reflecting on environmental issues and the natural world, drawing inspiration from your field studies to craft creative and reflective written pieces. Studying a range of authors, you will learn to develop your own voice and personal narrative style.

By opening up the classroom, exploring the environment, and studying seminal works by nature writers, this course gives you the opportunity to reflect on the relationship between nature and culture, as well as to explore your own connection to the natural world. Day and overnight field trips, lab studies, and cumulative written pieces are integral parts of the course experience, and you should come to campus prepared to get wet and muddy, to climb mountains and explore tidepools, to capture frogs and measure earthworms, among many other once-in-a-lifetime experiences!

*\*Please note that this course has a multi-day overnight trip that is required for students enrolled in the course, with an additional \$525 camping fee associated with it.*



## **High School Prep Institute: Math and English Acceleration**

*Grades 7 & 8*

Want to make sure you are on track to build the skills you need to succeed in high school? This interdisciplinary institute is designed to provide middle school students of all ages a pathway to academic success in math and English. Focusing on close reading of both fiction and nonfiction texts, analytical writing, and moving students to the next level of mathematical skill (regardless of their starting point), the *High School Prep Institute* will help students begin their journey towards secondary school readiness. In English classes, students will dive into a ninth-grade novel and related nonfiction texts, engaging in discussion, debate, and written analysis activities designed to build proficiency with argumentation, structure, and grammar. In their math section, students will review key mathematical skills and content from middle school by solving complex puzzles, learning a range of approaches to problem-solving that will help them to manage the types of mathematical challenges that they will face in high school.

## **Mapping Our World: The Art, Science and Math behind Maps**

*Grade 7 and 8*

How do you get from here to there? Where, exactly, is “here” and how do we know? Cartography, or mapmaking, dates back thousands of years, and its study involves a complex mix of math, art, science, and history. In this course, you will work to apply your understanding of the mathematical ideas of ratio, proportion, measurement, and scale, along with scientific concepts like geology and astronomy, as you read, analyze, and interpret maps from ancient to modern times. Cutting-edge scientific technology, including geolocation and satellite imagery, juxtaposed with an analysis of the many historic maps housed in the Oliver Wendell Holmes library, will provide you with a range of opportunities to hone your skills as a cartographer. You’ll grapple with questions of power, authority, agency, and voice as you consider who made maps and for what purpose, while creating your own maps for display in the final Exhibition of Learning. This is an unparalleled opportunity for advanced study using the extensive resources of Phillips Academy’s Addison Gallery and Knafel Map Collection and is not to be missed!

## **Revolution! Continuity and Change in Our World**

*Grades 7 & 8*

The themes of continuity and change will guide us as we explore two key turning points in U.S. history—the American Revolution and the Industrial Revolution. In a stimulating and highly interactive classroom setting, you will use your newly developed analytical thinking to examine the history and literature that led to dramatic changes in politics and everyday life in the 18th century. Actual trial documents—some biased, some conflicting—will help you and your classmates recreate on video the events of the Boston Massacre. You’ll also partake in a re-creation of the debate on American independence.

Next, your class will consider the social impact of the Industrial Revolution from the perspectives of the consumers, industrialists, and workers who together made our modern world possible. Fast-forward to 2023 as you draft your own literary response to today’s technological revolution. Two comparative projects will help connect the experiences of the American past with events going on throughout the world today.

## **NEW! Witchcraft in Colonial New England\***

Grades 7 and 8

Uncover the mysterious and captivating world of witchcraft in New England's history and literature in this exciting summer institute! Using a range of literature, nonfiction texts, primary sources, and field trips, students will explore the Salem Witch Trials and the broader history of witchcraft in New England in order to discover the social, cultural, and historical contexts that shaped this intriguing period.

Over the course of the five-week session, students will build skills in reading comprehension, written textual analysis, narrative structure, and argumentation. Classes will prompt students to engage in discussions and debates that encourage critical thinking and perspective-taking, to explore the portrayal of witchcraft in historical records and literature, and to foster open dialogue and intellectual growth. By analyzing key texts – including literary masterpieces by authors like Nathaniel Hawthorne or Arthur Miller – students will explore how beliefs and perceptions around witchcraft evolved over time. Field trips to historically significant sites will provide students with a tangible connection to the past. Visiting places like Salem, Massachusetts, to witness firsthand the locations and artifacts that shaped the witchcraft trials will help bring the novels and history we study to life.

*Witch Hunt* will take students on a thrilling journey through the past, blending historical understanding with literary exploration. Join us for an enchanting summer of discovery!

**\*ELL and non-ELL options available.** *Please note that students who are seeking additional support with their written and spoken English can enroll in the ELL section of Witch Hunt, in order to receive a more tailored version of the course that will support language acquisition. A study of English grammar, sentence structure, and language conventions will supplement the historic and literary studies, enabling students to build skill and confidence with the English language.*

## **LSI AFTERNOON ACTIVITY OFFERINGS**

Grades 7 & 8

- Basketball
- Dance
- Fitness
- Outdoor Games
- Power Walking and Running
- Soccer
- Swimming
- Tennis
- Ultimate Frisbee
- Volleyball
- Yoga/Pilates