



advanced studies and research

COLORADO ACADEMY UPPER SCHOOL CURRICULUM EVOLUTION

Explore, Ignite, Transform

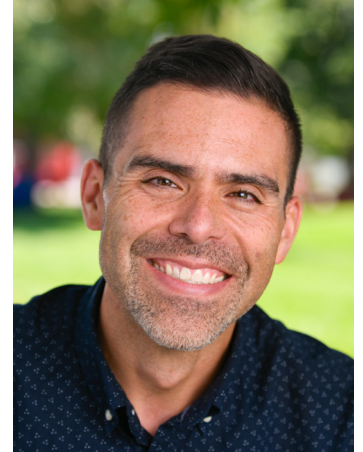
Walk our hallways, cross our courtyards, peek into our labs and lounges: You'll find Colorado Academy students catching up with their teachers, conversations that flow from one space to the next, and a supportive environment where kindness and curiosity intersect.

CA's Upper School program features an innovative and dynamic liberal arts and sciences curriculum full of stimulating electives, unique programs, and advanced courses that prepare students for lifelong intellectual engagement and success as global citizens in an increasingly complex world.

ASR: Intentional Design, Future Focus

Since 2023, most CA Upper School academic departments have offered Advanced Studies and Research (ASR) options, college-level courses designed by Colorado Academy faculty and academic leadership. These intensive experiences culminate in showcases where our community celebrates student ASR research papers, projects, and works of art.

CA continues to expand ASR offerings. All ASR courses are weighted and presented to colleges alongside Advanced Placement (AP) and Advanced Studies (AS) as the most rigorous in each discipline. Widely respected by colleges, ASR is a uniquely CA experience that our students seek out.



"At CA, discovery and wonder permeate our culture and our classrooms."

—Max Delgado,
Upper School Principal



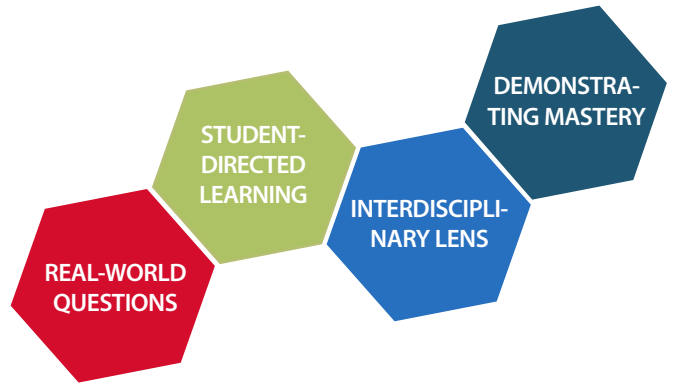
Logan Day-Richter '24, Yale University

In the ASR Superpower Politics: China, Russia & the United States, Logan Day-Richter '24 researched the economies of China and the Soviet Union during the Cold War. "The assignment was the culmination of my interest in political science combined with my writing, research, and reasoning skills."



What is ASR?

Built on the expertise and passion of our faculty members (in the Upper School, 92% possess advanced degrees), ASR courses may be oriented around projects that attempt to advance the current state of knowledge in a particular field. They require students to engage with real-world experts or academic endeavors.



“This kind of programmatic evolution is at the heart of CA’s mission and elevates student learning.”

—Dr. Mike Davis,
Head of School



ASR courses may seek to blend multiple fields of study to generate new understandings of a field through the interplay of disciplines.

ASR courses put purpose at the center. Students may choose their own area of investigation within a field, delving into the existing literature on a topic to develop a novel research focus.



In ASR, students engage with material often covered in college courses, with expectations around mastery not merely assessed through standardized exams.

The Move Away from AP

CA is not alone. More than 120 other leading independent schools across the country have developed their own college-level advanced courses, eliminating AP. (Some have never offered AP.) These include:

- The Athenian School
- Catlin Gabel School
- Choate Rosemary Hall
- The Dalton School
- Georgetown Day School
- Horace Mann School
- Lakeside School
- The Lawrenceville School
- Marin Academy
- Phillips Exeter Academy
- Pingree School
- Sidwell Friends

“CA students stand out because of their strong academic preparation, self-awareness, and authenticity. The stories they share with colleges about ASR research are compelling and distinctive in a world where many competitive applicants look the same.”



—Sonia Arora '01, Director of College Counseling and Upper School Strategic Initiatives

“The History of Ideas and Inventions (ASR) course that I took Junior year was unlike any of the classes I had taken in the past and was far more challenging than I expected. But what started as something that I felt was out of my league turned into a space where we were able to have discussions and learn about topics I had never heard of before. And, while writing the research paper at the end of the class was one of the hardest things I have ever done academically, it was a chance to push myself to my absolute limit to see what I can accomplish.”

—Lilly Biederman '25, American University



From Foundations to Depth

Throughout their time in the Upper School, CA students move steadily from foundational skills toward greater focus, depth, and self-direction.

FOUNDATIONAL COURSES

Students acquire discipline-specific skills, habits, and practices while exploring vital content.

ELECTIVES

Students apply knowledge in focused areas of study. Elective courses harness faculty expertise.

AP & AS COURSES

College-level seminars prepare students for AP exams.

ASR

Cultivating curiosity and mastery, ASR courses encourage students to explore the current state of knowledge, pursue big ideas, and develop a lifelong passion for meaningful, rigorous engagement.

Weighted Courses at CA

All courses designated as AP, AS, or ASR generate weighted grades. One or more advanced options are offered in all disciplines: Computer Science, English, Math, REDI Lab, Science, Social Studies, World Language, and Visual & Performing Arts.

Advanced Placement (AP)

The AP designation signifies college-level courses that prepare students for the Advanced Placement exam in that subject area. Students are required to take the AP exam in all AP courses. Students may be eligible to receive course credit at the college they attend depending on the score they receive.

Computer Science

- Computer Science A

Math

- Calculus AB, Calculus BC
- Statistics

Science

- Chemistry
- Physics I, Physics C

World Language

- French Language & Culture
- Spanish Language & Culture

Advanced Studies (AS)

CA's Advanced Studies (AS) designation signifies college-level courses that have increased rigor and include more depth of study than standard or Honors level courses. This designation replaces the "Post-AP" and "AP Level" labels used for some weighted classes in previous years.

Computer Science

- Data Structures

Math

- Advanced Topics in Mathematics: Calculus 3 and Linear Algebra

REDI Lab

- Entrepreneurial Mindset

Science

- Astronomy: Looking at the Stars
- Genetics
- Tiny Earth I & II
- Zoology/Taxonomy

Advanced Studies and Research (ASR)

Computer Science ASR

- AI and Machine Learning
- Computer Science Principles
- Robotics

English ASR

- The Anxiety of Influence
- Contemporary Literature of Israel, Palestine, and Lebanon
- Philosophy and Literature
- Prizewinners Now
- Russian Studies

Math ASR

- Cryptography in History and Mathematics

Social Studies ASR

- Economics in Theory and Practice
- The History of Ideas and Inventions
- International Gender Movements
- Superpower Politics: China, Russia & the United States in the Modern World
- Cryptography in History and Mathematics

Visual & Performing Arts ASR

- Music Theory
- Senior Portfolio in Ceramics, Film, Photography, or Studio Art

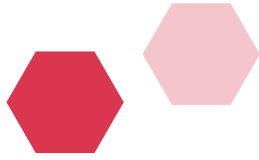
World Language ASR

- Chinese Cultural Studies
- 20th Century Hispanic Literature

In addition to ASR, AP, and AS classes, CA also offers approximately 45 Honors trimester electives across subject areas each year.

Recent ASR Final Research Projects Have Included

Two Visions, One Nation: An Analysis of Presidents Reagan and Trump's Inaugural Addresses



Solving Wordle in a Space of 839 Sextillion Combinations

The Spectrum of Storytelling—Who Gets it Right?: Evaluating Autism in Prizewinning Books and Movies



Data Governance and National Security: Tik-Tok's Role in the US-China Superpower Rivalry

“Benny’s Bells” - A Creative Usage and Jazz Recreation of the Song *Hringa Bjöllur*



Ruling the Infinite: An Analysis of Cold War Space Law's Attempt to Govern in a Commercial Age

The Empathy Effect: Why Fiction Matters in the Fight for Democracy

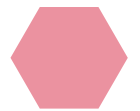


Justin Schwartzreich '26

Prescription for Power: An Analysis of Global Health Diplomacy and Traditional Superpower Rivalry

“My ASR experience was nothing short of wonderful. Our teacher created an engaging Economics course that went over the AP material but still gave us the chance to dive into our own passions, mine being the logic behind and the consequences of not implementing Hayekian economics.”

—Justin Schwartzreich '26



Learn more about ASR on CA's website.

