



# Beaver Country Day School Upper School Profile 2016-2017

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## THE SCHOOL

Founded in 1920, Beaver Country Day School is an independent coeducational day school serving students in grades 6 through 12. Located in a residential community just outside the Boston city limits, Beaver offers an academically challenging curriculum in an environment that promotes balance in students' lives.

Deeply committed to individual student success, teachers inspire students to:

- Reason and engage deeply with complex ideas and issues
- Be intellectually curious, open-minded, and fair
- Identify and build upon their strengths
- Develop leadership and teamwork skills
- Act effectively within a genuinely diverse cultural and social framework
- Serve both school and society with integrity, respect, and compassion.

Beaver's innovative and inclusive philosophy is embodied in the Upper School schedule, built around extended teaching periods that allow in-depth learning, emphasizing real-world problem-solving, collaboration, and flexible thinking, understanding multiple perspectives, and reflection. The curriculum

is designed to challenge each student to succeed against high standards as it acknowledges and honors individual capacities and experiences. Assessments include tests, examinations, and design thinking-based projects. Beaver continuously adapts emerging technologies in the classroom to improve students' learning experience.

Beaver is accredited by the New England Association of Schools & Colleges. Affiliations include the National Association of Independent Schools, the College Board, the Cum Laude Society, the National Association for College Admission Counseling, the Association of College Counselors in Independent Schools, and the Independent Curriculum Group.

## THE PEOPLE

Beaver students come from a variety of economic, ethnic, geographic, religious, and social backgrounds; students of color comprise 25% of the student body. Approximately 24% of students receive financial aid. 86% percent of the faculty hold advanced degrees. People of color comprise 20% of the faculty.

**Total enrollment, grades 6–12: 473**

**Class of 2017: 81**

## SCHEDULE

Beaver's block schedule divides the school year into three equal terms. Students take four classes each term, although some may elect to add a fifth (typically arts, music or an independent study). Extended class periods allow students to complete the equivalent of a semester course in one term; a full-year course extends over two terms.

## DIPLOMA REQUIREMENTS & CREDITS

As of the 2015-16 school year, all courses are graded at the end of each term. We no longer calculate a "year-end" grade.

Minimum diploma requirements for the Class of 2016 are:

<b>English</b>	4 years; 40 credits
<b>Mathematics</b>	3 years; 30 credits
<b>History</b>	3 years; 30 credits
<b>Science</b>	3 years, 2 in laboratory sciences; 30 credits
<b>Modern Language</b>	3 years in a single language; 30 credits
<b>The Arts</b>	2 years; 20 credits
<b>Electives</b>	equivalent to 4.5 years; 45 credits
<b>TOTAL CREDITS REQUIRED: 225</b>	
<b>Athletics</b>	Min. 1 season of interscholastic sport or fitness activities per year
<b>Afternoon Program</b>	3 terms, grades 9 and 10; 2 terms, grades 11 and 12

## CLASS RANK, WEIGHTING

Beaver does not rank its students. In calculating grade-point averages, Honors and Honors Advanced courses receive an additional weight of .33. Beaver does not award the grade of A+; the highest unweighted grade assigned is A (= 4.0). The GPA reported on the Beaver transcript reflects only grades earned at Beaver.

## Weighted cumulative GPA distribution for the Class of 2017 through Junior Year

2.4-2.9	3.0-3.3	3.4-3.5	3.6	3.7-3.8	3.9-4.0	4.1-4.2
10	17	12	13	12	5	8

*(represents only students with at least two full years' study at Beaver)*

## HONORS & ADVANCED COURSEWORK

Beaver does not offer Advanced Placement courses.

Students at Beaver may be enrolled in Honors courses in English, Mathematics, History, Science, and Modern Language. The Honors Advanced courses in Calculus, Biology, Chemistry, and Physics offer the highest degree of challenge in these subject areas, with syllabi and requirements equivalent to college coursework. Students may elect to take any course in grades 10, 11, and 12 in English and History at the Honors level. Honors work in these disciplines is differentiated by depth of content coverage, product expectations, and greater in-depth critical analysis.

In Mathematics, Modern Language, and the basic Science sequence (Physics, Chemistry, Biology), Beaver offers homogeneous sectioning—Standard (college preparatory) or Honors (college preparatory with additional expectations around intellectual engagement, depth of content, and depth of analysis)—in all required courses.

Although Honors credit is not offered for Independent Study (available in all disciplines), the development and approval process for each study is rigorous and requires an extremely high degree of student initiative.

## SCHOOL POLICY ON REPORTING DISCIPLINARY ACTIONS TO COLLEGES

Beaver's discipline system is founded upon the belief that students will learn from their mistakes if they are held accountable for their actions. Students are placed on "Warning," "Probation," or "Suspension" for a variety of reasons that might pass with a more mild rebuke at another school. To avoid ramifications that exceed our intent, it is our policy not to report disciplinary actions to colleges. However, if a student continues to exhibit a pattern of misbehavior during senior year, the school will communicate the pertinent information to colleges. Beaver counsels seniors to refer to this explanation when responding to questions regarding discipline.

The table below shows the sequence of coursework at Beaver. All courses are college preparatory. This is not an exhaustive list of our courses, but includes most courses offered for this year's class.

**KEY:**

- S (Standard) courses cover a complete college-preparatory curriculum
- H (Honors) courses for students who are willing and able to take on a higher degree of challenge and intellectual responsibility.
- Honors Advanced (H Adv.) represents the highest level of challenge in Science and Mathematics.

In addition to courses listed below, students may pursue Independent Studies in any subject area.

<p><b>ENGLISH</b> 4 years (40 credits) required</p>	<p>English 9 (S only)   English 10: American Literature (S, H)   English 11: Rhetoric (S, H) <i>Elective seminars*</i> (S, H): Storytelling; Contemporary Poetry; Great Books; 21st Century Non-Fiction; Short Stories; Science Fiction; Money, Money, Money; Literature &amp; Film; African American Literature; Ambition + Power</p> <p style="text-align: right;"><i>*Seminars for 2016-17, titles vary from year to year</i></p>
<p><b>MATHEMATICS</b> 3 years (30 credits) required</p>	<p>Algebra II (S, H)   Geometry (S, H)   Precalculus: Functions (S, H) Precalculus: Trigonometry (S, H)   Calculus (S, H)   Honors Advanced Calculus (H Adv.) <i>Electives:</i> Statistics; Entrepreneurship; Introduction to Investing; Game Theory</p> <p style="text-align: right;"><i>(credit for Algebra I is assumed)</i></p>
<p><b>GLOBAL HISTORY</b> 3 years (30 credits)</p>	<p>History I: United States History (S only)   History II: U.S. in the Modern World (S, H)   History III: Revolution to Globalization (S,H) <i>Electives*</i> (S, H): Ideologies; History of Science; Theories of Justice; Artists and Social Change; The Media and Its Influence; Race, Class, and Identity; Illusions and Delusions of the 20th Century; Honors Advanced Independent Research</p> <p style="text-align: right;"><i>*Electives for 2016-17, titles vary from year to year</i></p>
<p><b>SCIENCE</b> 3 years (30 credits); 2 years lab science</p>	<p>Physics Concepts 9 (S, H)   Chemistry (S, H)   Biology (S, H) <i>Electives</i> (S only): Anatomy &amp; Physiology; Biotechnology; Environmental Science; Forensics; Topics in Modern Chemistry; Engineering Design <i>Honors Advanced electives</i> (H): Adv. Biology, Anatomy and Physiology; Biology, DNA and Genetics; Chemistry, Organic; Chemistry, Equilibrium &amp; Thermodynamics; Physics, Mechanics; Physics, Electricity and Magnetism; Advanced Engineering Design</p>
<p><b>MODERN LANGUAGE</b> 3 years in a single language (30 credits)</p>	<p>Spanish I; French I; Chinese I; Arabic* Spanish, French and Chinese: Foundations (II-III), Intermediate (III-IV), Advanced (IV and above)</p> <p>As of the 2015-16 academic year, all courses after Level 1 are one-term topical seminars taught at the Foundational (II-III), Intermediate (III-IV), and Advanced (IV and above) level. Students may take up to three courses at each level.</p> <p style="text-align: right;"><i>*Arabic is offered on an individualized basis.</i></p>
<p><b>ARTS</b> 2 years (20 credits)</p>	<p><i>Visual Arts:</i> Art Principles; Materials &amp; Methods; Intermediate Drawing and Painting; Intermediate Photography; Intermediate Sculpture; Mash-Up Studio; Media &amp; Message; Field Work; Sculpture Lab; Alternative Processes in Photography; Drawing Lab; Art of Boston; You, Me &amp; Everyone We Know; Portfolio Development; Senior Studio (H)</p> <p><i>Performing Arts:</i> Intermediate Acting; Instrumental Ensembles (various levels); Stagecraft; Actor's Showcase; Scene Study; Drama Workshop; Advanced Play Production; Cuban Jazz Ensemble; Foundations of Theater; Chamber Ensemble; Chorus; Ikonoclastic; Select Singers; A capella</p>

## FRESHMAN MATRICULATION OF BEAVER GRADUATES

### Five-Year Summary (2012–2016)

**Bold** indicates multiple students

Allegheny College	<b>Emory University</b>	University of Puget Sound
<b>American University</b>	<b>Fairfield University</b>	Purchase College, SUNY
<b>Amherst College</b>	Franklin and Marshall College	Purdue University
Arizona State University	George Mason University	Regis College
The University of Arizona	<b>The George Washington University</b>	Rhode Island School of Design
<b>Babson College</b>	Georgetown University	University of Richmond
Barnard College	<b>Gettysburg College</b>	Rochester Institute of Technology
<b>Bates College</b>	<b>Goucher College</b>	<b>University of Rochester</b>
Beloit College	<b>Grinnell College</b>	Roger Williams University
<b>Bennington College</b>	<b>Hampshire College</b>	University of San Diego
Bentley University	<b>Harvard University</b>	Santa Clara University
<b>Berklee College of Music</b>	High Point University	Simmons College
Boston Architectural College	<b>Hobart and William Smith</b>	<b>Skidmore College</b>
Boston College	<b>Colleges</b>	<b>Smith College</b>
<b>Boston University</b>	Indiana University at Bloomington	<b>University of South Carolina</b>
<b>Bowdoin College</b>	University of Iowa	University of Southern California
<b>Brandeis University</b>	<b>Ithaca College</b>	Southern Methodist University
<b>Brown University</b>	<b>Johns Hopkins University</b>	<b>Spelman College</b>
<b>Bucknell University</b>	Johnson and Wales University	St. Edwards University
California Institute of the Arts	Kenyon College	<b>St. Lawrence University</b>
Cal Poly San Luis Obispo	Lasell College	<b>Stanford University</b>
UC Davis	<b>Lehigh University</b>	Stonehill College
UCLA	<b>Lewis &amp; Clark College</b>	Suffolk University
Carleton College	Loyola Marymount University	<b>Syracuse University</b>
<b>Carnegie Mellon University</b>	Loyola University Chicago	The University of Tampa
Case Western Reserve University	Macalester College	<b>Trinity College</b>
<b>Chapman University</b>	Maryland Institute College of Art	<b>Tufts University</b>
Clark University	Massachusetts Institute of Technology	<b>Tulane University</b>
<b>Colby College</b>	<b>University of Massachusetts,</b>	<b>Union College</b>
Colby-Sawyer College	<b>Amherst</b>	Ursinus College
<b>Colgate University</b>	Miami University (Ohio)	Vassar College
<b>College of Charleston</b>	<b>University of Michigan</b>	<b>University of Vermont</b>
<b>University of Connecticut</b>	Middlebury College	Villanova University
<b>College of the Holy Cross</b>	<b>Morehouse College</b>	University of Virginia
<b>University of Colorado at Boulder</b>	<b>Mount Holyoke College</b>	<b>Wake Forest University</b>
<b>Colorado College</b>	<b>New York University</b>	<b>Washington University in St. Louis</b>
Columbia University	<b>Northeastern University</b>	Wellesley College
<b>Connecticut College</b>	<b>Northwestern University</b>	Wentworth Institute of Technology
<b>Cornell University</b>	<b>Oberlin College</b>	<b>Wesleyan University</b>
Davidson College	<b>Occidental College</b>	<b>Wheaton College MA</b>
<b>University of Delaware</b>	Parsons The New School for Design	<b>Wheelock College</b>
<b>University of Denver</b>	University of Pennsylvania	<b>Williams College</b>
Dickinson College	University of Pittsburgh	<b>University of Wisconsin, Madison</b>
<b>Drexel University</b>	<b>Pitzer College</b>	The College of Wooster
Earlham College	Pomona College	Worcester Polytechnic Institute
<b>Elon University</b>	Pratt Institute	<b>Yale University</b>
<b>Emerson College</b>	<b>Providence College</b>	

*Beaver is recognized globally as a leader in education, emphasizing creativity, innovation, and flexibility of the mind. Students go beyond mastery of content and conventional problem solving. They are prepared for an undefined era where the new basics – creative problem solving; collaboration; iteration; visual communication; empathy; tech and media literacy; and presentation skills – are the cornerstones of professional success and personal development. Below are just a few of the experiences students have at Beaver.*

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## NUVU

Beaver is the founding partner of NuVu, an innovative trimester-length program whose pedagogy is based on the studio model of teaching and learning. Students may attend from 10th-12th grade.

NuVu's network of coaches draws from MIT, Harvard University, and myriad of other industry experts. Students are guided through tackling real world issues using hands-on problem-solving. This inventive culture promotes peer teaching and learning, and cultivates curiosity. NuVu challenges students to learn in new ways: analytical thinkers are inspired to explore their creative selves, while creative students expand their capacity to think and learn analytically.

**In total, 80% of Beaver students will complete a term at NuVu by the time they graduate.**

## PROJECT EXAMPLES

**Prosthetic Ratchet Hand:** one of five prosthetic hands designed based on code from MakerBot Robohand

**Environmental Education Game:** a tablet-based superhero game that teaches children how to properly dispose trash

**Affordable Water Filter:** designed to be affordable for low-income families, the filter removes salt and other contaminants from water

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## HIATT CENTER FOR LEADERSHIP AND CIVIC ENGAGEMENT

The Hiatt Center's approach is unique among secondary schools. The center supports discussions of global and social justice issues – in and out of the classroom – cultivates leadership skills students will use to effect change, now and in the future.

The staff of the Hiatt Center works with our students and teachers to build these skills and provide civic engagement opportunities through events and programs.

The Hiatt Center also creates partnerships with community organizations, allowing students diverse service learning opportunities. During the summer, the Hiatt Center pairs students with internships at national and international organizations.

## EVENT AND PROJECT EXAMPLES

**Beaver Leader Summit:** consists of a series of workshops that bring students together to develop their leadership skills and facilitate conversations about what it means to be a leader at Beaver and beyond.

**The Road to Cuba:** an opportunity for Beaver jazz and Spanish students to travel to Cuba to engage in a music and cultural exchange.

**Hiatt Summer Stipend:** provides for Beaver students the financial support to explore and participate in meaningful summer leadership and civic engagement work.

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## CODING

Beaver continues to be nationally recognized as a leader in integrating coding across our curriculum. Coding is woven organically and authentically into our classrooms. Whether it's creating simulation that illustrates a scene from Macbeth, or writing an algorithm in calculus class to more efficiently determine the slope of a formula, we are committed to providing our students with the tools they need to maximize their learning here and prepare them for success beyond Beaver.

## PROJECT AND EVENT EXAMPLES

**Hour of Code:** annual challenge by Code.org to code for one hour. teachers across all disciplines lead students through various tutorials and activities that connected their specific course content to coding.

**Macbeth simulation:** perplexed by the complicated death scene in Macbeth, a student used PencilCode in English to better understand what happened.

**Graphing calculator:** students in Calculus class created their own graphic calculator using code.