Maine Committee on Education and Cultural Affairs.

April 25, 2025

Written Testimony submitted against proposal #LD1571

Thank you to:

Representative Crockett, Sponsor
Representative Kelly Murphy - Chair,
Senator Joseph Rafferty - Chair

and Members of the Committee

Submitted by Vincent Aliquo, Baxter Alum '16

I am Vincent Aliquo, an alum of Baxter Academy, a charter school in Portland, Maine, which will be negatively affected by the proposed change. As part of the first graduating class, I've experienced firsthand the transformative power of education delivered by professionals with real-world expertise. Baxter Academy opened doors for me that traditional education could not, providing me with both technical skills and a passion for learning that continues to this day.

The education I received at Baxter directly contributed to my professional success. I felt more prepared going into college, and confident in my career path. Today, I serve as VP of Engineering at Haiku, Inc., where I lead teams building cybersecurity training used by both government and private sectors.

None of this would have been possible without the unique learning environment that Baxter Academy created, an environment enriched by educators who brought diverse, working experience directly into the classroom.

The proposed changes to this bill would deprive students of diverse and relevant professional knowledge. Teachers at Baxter Academy don't just teach theory, they demonstrate how that theory applies to solving real challenges students will face in their futures.

Changes to this bill will create barriers to recruiting top talent. Many exceptional professionals who could inspire the next generation would be excluded from teaching because they lack traditional certification.

It will limit project-based learning opportunities. My education at Baxter was defined by hands-on projects guided by professionals who understood their real-world applications. And it will reduce innovation in education. Charter schools like Baxter Academy thrive by implementing innovative teaching methods often led by those with diverse backgrounds. Some of my most influential teachers at Baxter were those who came directly from industry. Their perspective provides an invaluable foundation for student success.

I urge this committee to reject the changes to this bill and instead support policies that encourage diverse pathways into teaching. The future of education lies in connecting

classroom learning to the real world. Baxter Academy clearly demonstrates that when we allow innovation in who teaches and how they teach, students benefit immensely. Let's not take a step backward by limiting the pool of qualified educators who can inspire our next generation.

...Please vote "ought not pass" on #1571.

01 STEM BA for Technology and Science

Baxter Academy
for Technology and Science

Course of Studies 2025-2026

Baxter Mission

Inquiry leads learning at Baxter Academy for Technology and Science, a public charter high school free to students. Our project-based STEM curriculum emphasizes real-world problem-solving and is paired with a humanities program that connects ideas across disciplines and cultivates strong communication skills. Students design innovative projects through Flex Friday, a unique program requiring initiative, perseverance, and collaboration, as well as reflection on the work and its impact on the community.

Baxter Academy is a rigorous college and career-preparatory high school promoting student ownership of learning. We serve students with a strong interest in science, technology, engineering, and math (STEM); we teach deep commitment to the community. Students study complex, real-world problems, using and building technological tools in a collaborative environment with scientists, engineers, and other professionals. The school sets high expectations for all students, promotes innovation and creativity, and produces graduates with a 21st-century global perspective. A Baxter student's academic journey is guided by standards for Science, Design, Mathematics, and Humanities. The school's engaging and challenging curriculum is taught by innovative teachers, who help guide students to be passionate, self-directed learners. At Baxter, student inquiry is supported by technology-rich project-based learning. Baxter was founded in 2013 and is located in the largest Maine urban center, which provides partnerships and resources to connect student learning with real-world work and needs. Our campus sits next to the tidal basin Back Cove, which is ringed by a green space with 3 miles of trails used for oceanfront walking and biking.

100% Baxter Faculty are trained:

- to use CAD or Fusion 360
- to use public data sets to drive student inquiry across all content areas

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Academic Norms

As a college preparatory school, we hold these academic high-expectation norms for our community:

Students carry obligations to the community.

- Showing up for each other -Do I show engagement during class times or other learning gatherings? Do I actively engage in teamwork when called upon and even step up to lead?
- Preparation- Am I clear about what I need to come to the next class as a member of my learning community?
- Deadlines & Expectations- Am I meeting deadlines and expectations, and holding myself accountable for what I am responsible for?
- Discourse & Communication - Do I engage in discourse (listening, sharing, and facilitating) and practice professional norms of respectful and clear writing communication?
- Care for peers- Am I self-aware and group-aware in learning environments? Am I practicing positive social management?

Students carry obligations to self.

- Responsible for meeting commitments- How do I maintain positive social-emotional wellness, including by not accruing over-due deadline debt?
- Heterogeneity (Self Acceptance) - Do I accept myself for my unique character and needs, but also understand that I live, serve, and work in a community?
- Advocacy - How do I identify the help I need, know where to look, and ask for it?
- Note-taking- How do I maintain records and process notes for my learning so that I can take ownership of my learning?
- Study skills for assessments- How do I structure a way to hone my knowledge and skills for upcoming presentations of my work?

The kids love having a day per week dedicated to one project. It helps them feel a purpose and accomplishment that is all their own." - Baxter Academy Parent

Course of Study

A Baxter student will take foundational core courses and will select courses that target their areas of interest, especially as they become Junior and Senior students. Generally, a third of a student's academic program consists of core Baxter courses; our program offerings are rich with STEM and additional academic options to tailor the student's journey to their exploratory and focal interests. A minimum enrollment of 5 courses during each semester of school is required, except with the express approval of the school's administration. Class of 2027 and earlier should refer to the 2023-2024 Course of Studies.

Core Baxter Courses

4 years of Flex Friday and Advisory
4 years of Mathematics
4 years of laboratory science study
3 years of Humanities
1.5 years of Design
1 year of Fine Art
World Language to level ELE at minimum
3 years of Electives at minimum

Foundation	Choice Core	Choice Explore/ Concentrate

	1st Year	2nd Year	3rd Year	4th year
Mathematics	Alg IA/1B Accel Alg2TrigStat	Geo 2D and/or Alg 2 Accel PreC/Geo/Sta	Alg 2 and/or Geo3D PreCalc/Calc	Stats/PreCalc, Calc Diff Equations
Science	Physical Science Life Science	Biology Chemistry	Applied Science Advanced Science	Applied Science Advanced Science
Humanities	Humanities I	Humanities 11	Humanities III	Humanities (College Ready)
World Language	WL- BGN	WL- ELE WL -INT (College Ready)	WL-UP (College Ready) Elective	Elective Elective
Design & Art	Design and/or Art Elective	Design and/ or Art Elective	Elective Elective	Elective Elective
Student Led Inquiry	Flex Friday	Flex Friday	Flex Friday or Internship	Flex Friday or Internship
Community Programs	Advisory- Whole student	Advisory- Whole student	Advisory- College/Career Exploration Junior Seminar	Advisory- College/Career Application Senior Seminar

Baxterian-Created Concentrations

Meeting Community Need

Baxter students spend their time honing their skills, deepening their knowledge, gaining voice, so that they can be active members in building stronger communities. Below are scholarship concentrations created by Baxterians that connect rigorous classroom learning with community partnerships to produce work that serves the developing inquiries of our students with the needs of our world. Baxter students and educators have spent time on sustainable energy, health and medicine, Maine's housing crisis, and materials science. These pathways include research, engineering, technician, and storytelling.

Biodiversity & Ecology | Energy Solutions | Health & Medicine | Information Systems | Housing Crisis | Materials Science

In their first year, Baxter students enroll in a core curriculum for math, science, humanities, world language, and design. See above for some possible courses of study for students with particular areas of interest. Student Flex Friday programs can be tailored to student inquiry, supported by a Baxter educator as a coach; we encourage student Flex Friday projects to be collaborative. **Use the space below to imagine a possible future for yourself...**

	Fall A-E classes	Spring A-E classes	Flex Friday Project	Clubs/Student Life
9th				
10th				
11th				
12th				

Baxter Academy
for Technology and Science

Standards of our Curriculum

Baxter students commit to a rigorous academic journey and perform with clear expectations. Through their classes, students gain content and skills. These expectations, as named by standards, have overlaps across the curriculum and allow a student to pursue increasing rigor.

Mathematics

Algebra	Functions	Geometry & Spatial Reasoning	Statistics and Probability
• Seeing Structure in Expressions • Creating Equations • Reasoning with Equations and Inequalities • Arithmetic with Polynomical & Rational Functions • Complex Number System	• Interpreting Functions • Building Functions • Modeling with Functions	• Conguence • Similiarity, Right Triangles, Trigonometry • Expressing Geometric Properties w/ Equations • Geometric Measurement & Dimension	• Interpreting Categorical & Quantative Data • Making Inferences & Justifying Conclusions • Conditional Probability & Rules of Probability • Probability in Decision Making

Science

Force & Motion	Matter & Energy	Heredity & Evolution	Climate Change
• F&M Sci & Engineering Practices • F&M Cross Cutting Concepts • Interactions • F&M	• M&E Sci & Engineering Practices • M&E Crosscutting Concepts • Reaction • Structure	• H&E Sci & Engineering Practices • H&E Crosscutting Concepts • Inheritance & Variation • Structure, Function & Development	• CC Sci & Engineering Practices • CC Crosscutting Concepts • Cycles • Systems

English Across the Curriculum

Writing	Speaking and Listening	Reading
• Voice, Audience & Style • Conventions • Cohesion/ Organization • Development Ideas	• Presentation • Discussion	• Craft & Structure • Key Ideas & Details • Citing Evidence

Design

Design Process	Computer Science	CAD	Engineering	Fabrication
• Analyze • Optimize • Develop Solutions • Identify Problems	• Code Design • Information Technology • Professional Practices • Programming Techniques	• Modeling • Simulation	• Design Process • Modeling • Math & Computer Science	• Theory • Manufacturing • Craftsmanship • Tools • Materials

Social Studies

Civics & Government	Economics	Historical Context	Research
• Policy Making • Process • Civics • Government	• Historical Economics • Understanding • Economic Systems • Money Management	• Historical Thinking	• Application • Information • Gathering Inquiry

World Language

Interpersonal Communication	Interpretive Communication	Presentational Communication
• Interpersonal Communication	• Listening • Reading	• Speaking • Writing

Arts

Aesthetics & Meaning
• Visual Arts Content, • Visual Arts Tools or • Composition & Performance

General Guidelines for Colleges and Universities

If you plan to go to a four-year liberal arts college, you should consider these electives:

- Upper level full-year lab science courses
- Additional Humanities electives in both English & Social Studies
- World Language through level 3 at minimum and level 4 preferred (A sequence of one language is preferred, and many schools require 2 years of language study.)
- Additional concentration and exploration electives in the highest rigor right fit courses for you- this means reaching for additional Baxter 300 and 400-level courses.

If you are planning to attend a science or engineering college, you should take these electives:

- Strong selection of Math and Science Courses including full-year lab science
- Humanities English & Social Studies
- World Language through level 3 at minimum and level 4 preferred (A sequence of one language is preferred, and many schools rarely require 2 years of language study.)
- Additional concentration and exploration electives in the highest rigor right fit courses for you- this means reaching for additional 300 and 400-level courses.

If you are planning to go to a two-year college or technical school, you should consider these electives:

- Humanities English
- Continued Math Studies
- Dual Enrollment

Get College credit at Baxter Academy!
Students who have achieved advancing in standards may consider dual enrollment through our partnering universities for up to 12 college credits.

Internships

Qualified Juniors and Seniors may work at an internship through our Flex Friday program that gives insight into a career or academic focus.

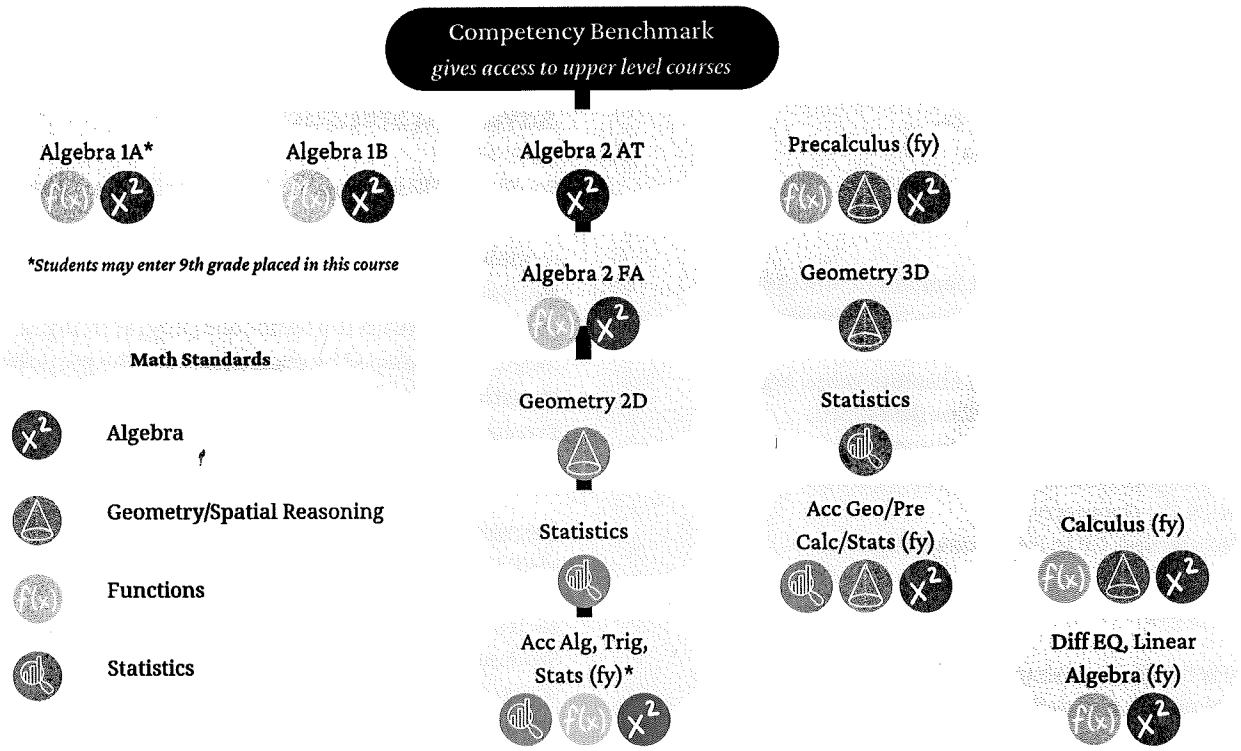
Dual Enrollment

Students who have achieved advancing in standards may consider dual enrollment through our partnering universities for up to 12 college credits.

I feel like the variety of classes helps students stand out and the level of education is higher than a standard public school. This will make students more likely to get accepted into their preferred college as well as get scholarships."
- Baxter Academy Parent

Mathematics

Learning mathematics at Baxter Academy is deeply rooted in inquiry and problem-solving. Students build and expand their mathematical understanding and abilities, as well as make connections to prior mathematical knowledge and other subjects or disciplines. Baxter teachers strive to engage students in interesting and challenging mathematics that will prepare them for future study. Baxter students take a minimum of 4 full years of Math with the option for additional study.



Algebra 1A

MAT 110

This course introduces mathematical objects such as expressions, equations and inequalities. We will examine techniques for evaluating, solving, simplifying and rearranging these objects, as well as translating literal phrases into mathematical statements. Linear equations, ratios and proportions, polynomials and other objects will be explored with their broader applications in the sciences.
If time allows a brief introduction to qualitative statistics may be explored. Standards assessed: EN in Algebra and Functions

Algebra 1B

MAT 111

This course is the second semester of a full-year course. The emphasis will on consolidating algebra skills already developed, especially algebraic manipulation, and moving on to further topics in algebra with applications to geometry. The following topics will be covered: the Pythagorean theorem, quadratic equations, graphs of linear and quadratic functions, systems of equations, laws of sines and cosines. Advanced topics for the end of the semester will be chosen according to student interest. Standards assessed: PR in Algebra and Functions

Accelerated Algebra 2 with Trigonometry & Statistics

MAT 340

This course is for students with strong Algebra 1 skills who are ready to accelerate in math as 9th grade students. The focus of the course will be solving algebra problems by algebraic manipulation as well as by graphical methods. The primary skills to be developed include: multiplication of polynomials, factoring, simplification of algebraic fractions, properties of roots, solving linear, quadratic, and irrational equations, together with the corresponding word problems. The elements of the theory of functions, algebraic geometry, and trigonometry will be covered, with occasional problems in the geometry and trigonometry of triangles and circles and some basic statistics. Exceptionally challenging problems will be provided for interested students. This course is in place of MAT 100, 201, 301, and 323. Prerequisites: Strong algebra background and recommendation of Baxter mathematics faculty. Standards Assessed: CB in Algebra & Functions, PR in Statistics.

Algebra 2 AT Algebraic Techniques

MAT 301

This course follows STEM Math in the Algebra and Functions sequence. Designed for students who finish the STEM class at the progressing level for Algebra. Topics of study include quadratic functions and applications, solving quadratic equations, finding different forms of quadratic functions, and working with zeros and factors. Additional work with polynomials and complex number solutions to quadratic equations will be introduced as time allows. This course may be taken concurrently with MAT 315. Prerequisite: PR in Algebra.
Standards Assessed: CB in Algebra

Algebra 2 FA Functional Analysis

MAT 323

Students continue learning about families of functions and the algebra supporting them. Function families will extend from the familiar linear, exponential, and quadratic to rational, polynomial, absolute value, and square root. Function families will be developed, explored, and applied to appropriate contexts.
Prerequisites: successful completion of Algebraic Techniques & 2D Geometry.
Standards Assessed: CB in Functions & Algebra.

Geometry 2D

MAT 315

Geometry is the study of shape and size. This class will focus on properties and definitions of one- and two-dimensional shapes : lines, angles, polygons, and circles. Geometric transformations using coordinate geometry lead to concepts of congruence and similarity and lay the foundation for transformation of functions in MAT 400. Familiar geometric theorems will be explored and proven using deductive reasoning. This course may be taken concurrently with MAT 301.
Prerequisite: PR in Algebra.
Standard Assessed: CB in Geometry.

Geometry 3D

MAT 410

Students will extend their knowledge of geometry by investigating the three-dimensional analogs of two-dimensional concepts. This includes the properties of three-dimensional shapes, creating orthogonal and isomorphic projections, and applying their learning to architectural and design situations. Students will study the effects of scaling up or scaling down and how to fill or pack space efficiently. Students will extend their understanding of symmetry by visualizing slices through objects and analyzing the shape of the resulting slice.
Prerequisite: CB in Geometry.
Standard Assessed: AD/EX in Geometry.

Statistics

MAT 330

This course will include statistical studies and survey techniques. Topics include a review of descriptive statistics, normal distributions, types of statistical studies, random variables, sampling distributions, confidence intervals, hypothesis testing, two-way tables, and conditional probability.
Prerequisites: PR in Algebra.
Standards Assessed: CB in Statistics.

Advanced Statistics

MAT 435

Students will deepen their learning of statistics by creating statistical models and analyzing how well those models represent the data. Extended methods of statistical inference will be explored. Additionally, students will learn the basics of R programming, a language developed by statisticians for the purposes of statistical analysis.
Prerequisite: CB in Statistics.
Standards Assessed: AD/EX in Statistics.

Personal Finance

MAT 355

The focus of this course is understanding the events in each student's life that will impact them financially. Students will use algebraic and graphical analysis to assess their costs, their sources of income, and how to build a solid financial future. Major projects for this course will focus around understanding job markets and the costs and benefits of college, creating and managing a budget, and planning for taxes and retirement. Throughout the course, students will practice algebraic thinking and create, use, and interpret linear and exponential functions as models for financial situations.
Prerequisites: CB in Algebra.
Standards Assessed: CB for Research, Economics, & Functions.

Pre-calculus

MAT 400, Full Year

Intensive review of function families with the addition of trigonometric, logarithmic, parametric functions, and function inverses. Students will use algebraic manipulation to solve equations involving polynomial, trigonometric, exponential, logarithmic, and rational functions. The mathematics of complex numbers will be developed and applied in algebraic and geometric contexts. Topics will also include a careful look at conic sections (circle, ellipses, parabolas, and hyperbolas) from their geometric definitions and extending their algebraic representations.
Prerequisites: CB in Algebra, Functions, and Geometry.
Standards Assessed: AD in Algebra, Functions, and Geometry.

Advanced Pre-calculus/Geometry with Statistics

MAT 401, Full Year

This course is a study of advanced algebra, trigonometry, geometry, and statistics. The goal is to prepare students for calculus, while boosting their problem solving ability and their written and oral mathematical presentation skills. The first few weeks of the course will be used to consolidate student's skills in algebraic manipulation, including advanced algebraic simplification and the solving of linear and quadratic equations and word problems. Precalculus topics will include: the elements of number theory, polynomials, rational expressions, trigonometric functions and identities, inverse trigonometric functions, exponential and logarithmic functions, solution of trigonometric, exponential, logarithmic, and irrational equations. Problems in two-dimensional and three-dimensional geometry will be incorporated into daily work. Statistics material (mean, variance, standard deviation, correlation, regression, chi-squared test, t-test) will be coordinated with concurrent science courses. A very strong algebra foundation is a prerequisite. This course follows MAT 340 and covers same material as MAT 315, 330, and 400. Prerequisites: Successful completion of MAT 340 or CB in Algebra & Functions. Standards assessed: AD Algebra & Functions, CB Geometry & Statistics

Calculus

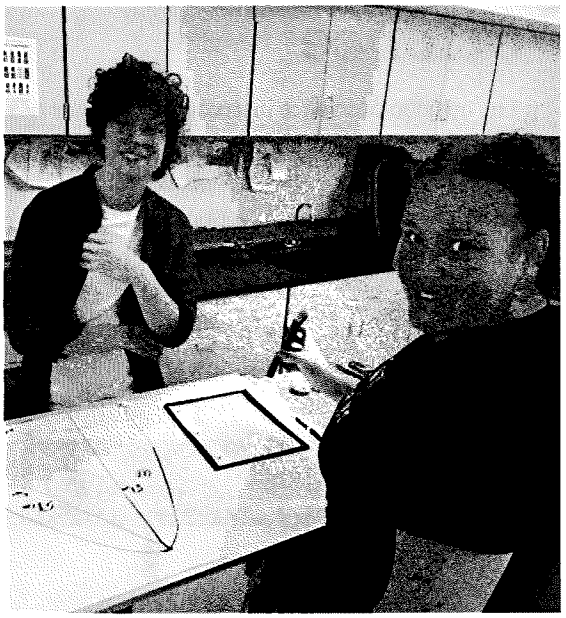
MAT 500, Full Year

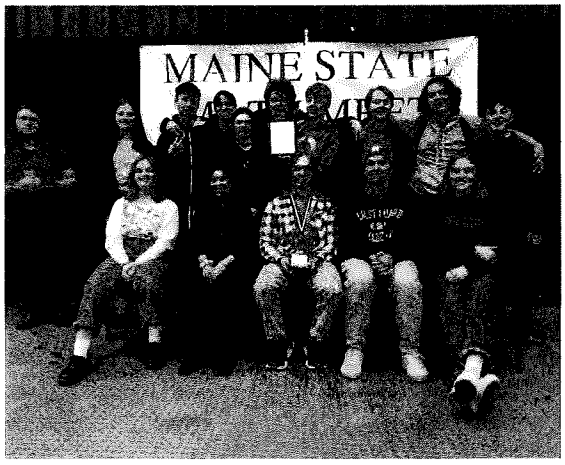
Calculus introduces the concept of limit and applies it to the definition of derivative and integral of a function of one variable. The rules of differentiation and properties of the integral are emphasized, as well as applications of the derivative and integral. Additional topics include techniques of integration, indeterminate forms and L'Hôpital's Rule, improper integrals, infinite series, conic sections, parametric equations, and polar coordinates. Prerequisites: AD in Algebra, Functions & Geometry. Standards Assessed: EX in Algebra, Functions & Geometry.

Differential Equations & Linear Algebra

MAT 500, Full Year

A year-long introduction to topics that are typically covered in the first two years of college. The course will emphasize first and second order differential equations, and advanced problem solving with matrices and determinants. Standards Assessed: BA in Functions & Algebra.





Science

The mission of science instruction at Baxter Academy is to prepare our students to be knowledgeable, scientifically literate, responsible citizens and problem solvers in an increasingly complex, dynamic, and interconnected world. We seek to build upon a fundamental understanding of all scientific fields by nurturing student curiosity, disciplined inquiry skills, and understanding science in a real-world context. Baxter students build foundational practices and knowledge by reaching competency in chemistry, biology, physics, and climate and earth systems according to NGSS standards. During their junior and senior years, students have a wide variety of elections to explore or concentrate on, such as engineering, engineering, or life science for their future college and career. Throughout students progression at Baxter, they will be challenged to complete labs, record findings, and walk through the scientific process from start to finish.

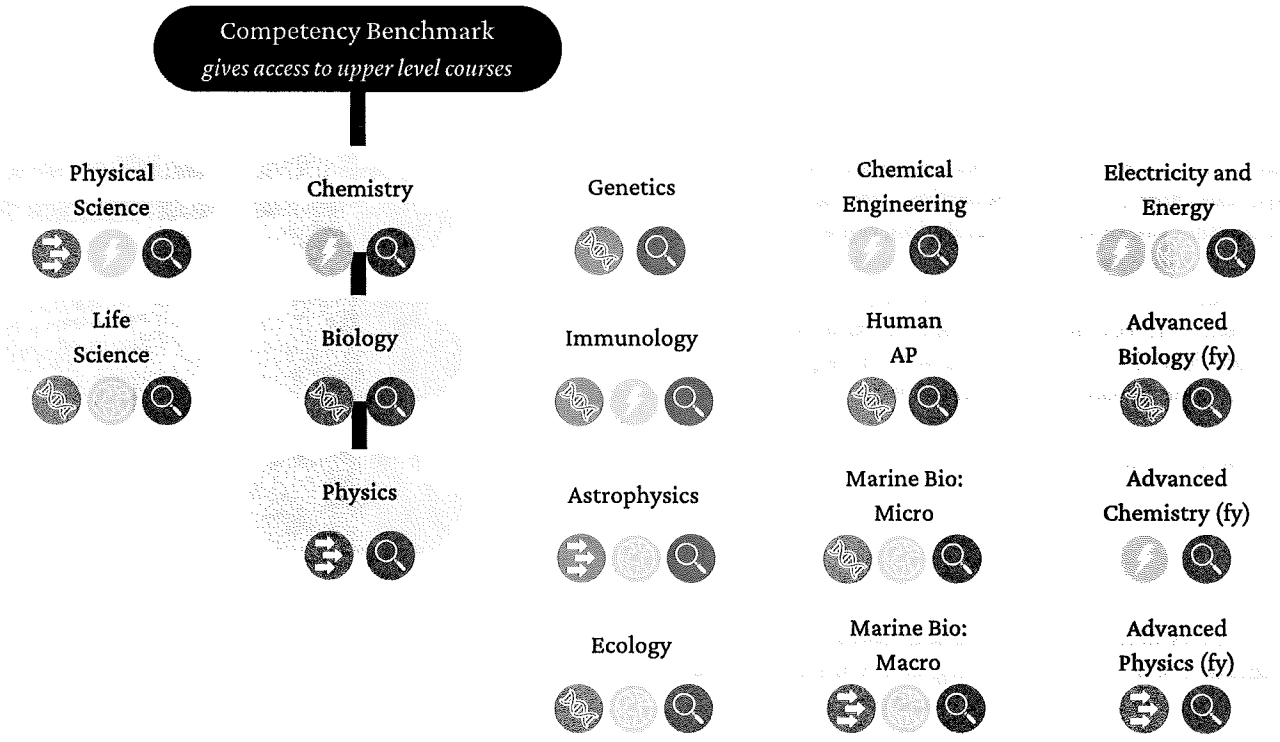
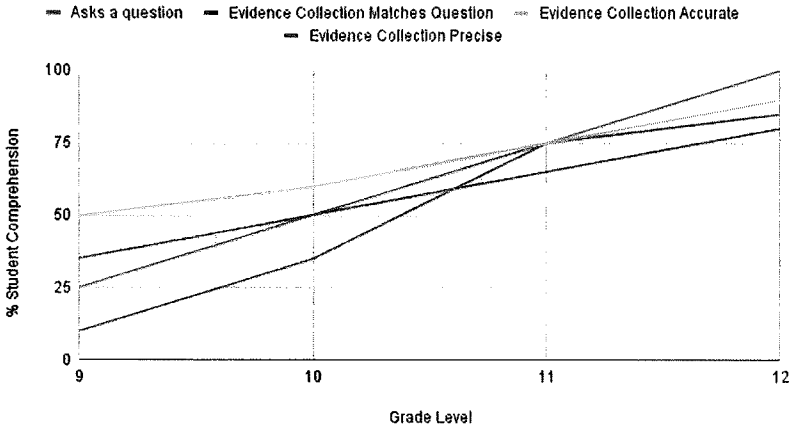


Figure 1. Student Progression at Science Practices



Science Standards

- Science Practices
- Heredity & Evolution
- Matter & Energy
- Forces & Motion
- Climate

Starting with the Class of 2028, all 9th grade students will be taking the two first year courses listed below.

Physical Science

SCI 101

A lab-based science course for incoming 9th graders that serves as an introduction to physics and chemistry. Topics covered include chemical reactions, physical properties, acid/base chemistry, linear motion, kinematics, and gravity. Standards assessed: PR Forces & Motion, Matter & Energy.

Life Science

SCI 201

This course is designed to introduce students to the fundamental concepts of life science and illustrate the application of these principles. The curriculum will focus on actively engaging students with the world around them using the scientific method as the basis of discovery. Topics include the building blocks of life, cell biology, cellular processes, and transcription and translation. Standards Assessed: PR Heredity & Evolution, Climate & Earth Systems.

Three core Sciences: All students will be at the competency benchmark upon completing these courses.

Biology I

SCI 355

Biology provides students with a comprehensive introduction to patterns of inheritance, diversity of life, populations and communities, and the Biosphere. Lab based inquiry will be enforced through experimentation while highlighting data collection and analysis. Interactions among organisms and their biophysical environment will be an overarching theme throughout this course. Standards Assessed: CB Heredity & Evolution.

Chemistry I

SCI 360

A lab course focused on the basics of chemistry. The course will cover ionic reactions, stoichiometry, electron configurations, precipitation reactions, models of the atom and periodic trends. A semester course focused on the connection between chemistry and our impact on earth. Students will be connecting their knowledge of chemistry to learn about and propose solution surrounding alternative energy sources. Standards Assessed: CB in Matter & Energy.

Physics I

SCI 365

An introductory course to core concepts in physics. Optics, electromagnetism, electricity, optics, and forces and motion will be covered throughout the semester. Standards Assessed: CB Forces & Motion.

Prerequisites for the courses below include competency benchmark in the three core sciences listed above.

Genetics

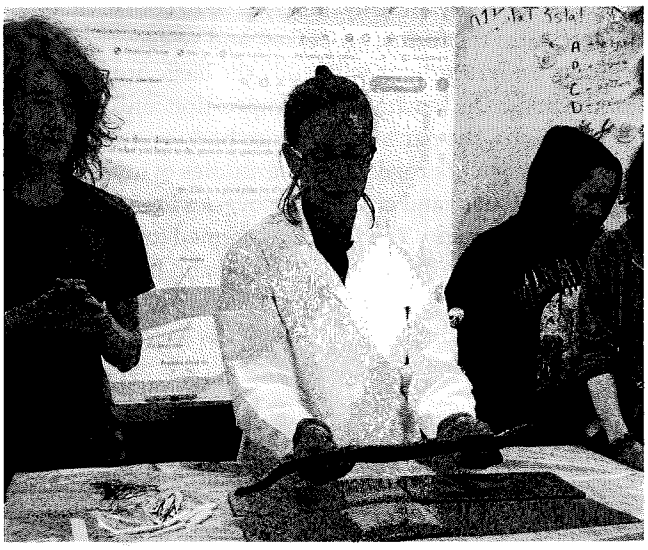
SCI 420

In this course, students investigate the storage of genetic information in DNA, its transmission from cell to cell and from generation to generation, and its expression during protein synthesis. Students investigate patterns of inheritance for various traits using principles of Mendelian and molecular genetics. Students also investigate the application of biotechnology for meeting human needs in the areas of genetics, reproduction, development, and evolution. Standards Assessed: AD Heredity & Evolution.

Immunology

SCI 425

Students will learn about the immune response, the cell biology of the immune system, the nature of antigens, antibodies, B and T cells. The nature of tumor immunology and cancer development will also be covered, with an emphasis on the role of the immune system to maintain homeostasis in an organism. Standards Assessed: AD Heredity & Evolution, Matter & Energy.



Astrophysics

SCI 430

An algebra-based physics course covering a wide range of classical and modern physics concepts. Topics include: Optics, electromagnetic radiation, orbital dynamics, stellar evolution, and cosmology. Standards assessed: CB/AD in Forces & Motion

Ecology

SCI 435

This course addresses the EQ?s through the lens of Maine's varied and complex ecosystems. Students will learn about ecological relationships, as well as the ways in which energy, matter, and information flow within and between ecosystems. There will be an emphasis on identifying and addressing ways in which humans can alter their impact on the environment. Standards Assessed: CB/AD Heredity & Evolution, Climate & Earth System.

Chemical Engineering

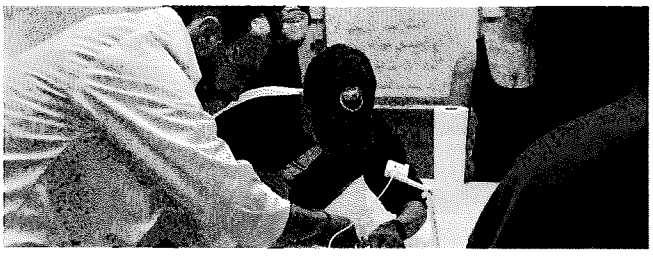
SCI 440

This chemical engineering course will focus on clear energy and energy transformations. By studying chemical reactions, we will learn how to create sustainable energy. We will discuss methods for converting matter from one source to another with out creating net positive carbon output. We will also analyze the structure of various materials. Standards Assessed: CB/AD for Forces & Motion, Matter & Energy

Human Anatomy and Physiology

SCI 445

Human Anatomy and Physiology is a lab course that investigates the forms, processes, and systems of the human body. Students will study the basic organization of the body, the biochemical composition and interactions, the parts of the major body systems as well as how they work together. Case studies of infectious and genetic diseases and current discoveries in medicine will enhance our study. This class is designed for students who are interested in the health field and for students who want to learn more about their bodies and how to maintain a healthy lifestyle. Standards Assessed: CB/AD Heredity & Evolution.



Marine Biology: Microfauna

SCI 455

Marine biology focuses on life in the ocean. This course introduces students to the many types of plants and animals that live in the ocean, on a macro level. It will have an ecological approach that will emphasize the big picture and the relationship between all organisms and how they are suited to live in their habitats, specifically Maine. An ongoing focus throughout the year will be the impacts of climate change on the oceans, and what our environmental impact has been. Laboratory activities reinforce the concepts and principles stated, as well as field trips, dissections, projects, and independent research. Specific topics covered are fishes, marine mammals, and specific marine habitats. Standards assessed: CB/AD in Heredity & Evolution, Climate & Earth Systems.

Marine Biology: Macrofauna

SCI 460

Marine biology focuses on life in the ocean. This course introduces students to the many types of plants and animals that live in the ocean, on a micro level. It will have an ecological approach that will emphasize the big picture and relationships between all organisms and how they are suited to live in their habitats, specifically in Maine. An ongoing focus throughout the year will be the impacts of climate change on oceans, and what our environmental impact has been. Laboratory activities reinforce the concepts and principles stated, as well as field trips, dissections, projects, and independent research. Specific topics cover water chemistry, plankton, and invertebrates. Standards assessed: CB/AD in Heredity & Evolution, Climate & Earth Systems.

Electricity & Energy

SCI 465

Electricity and Energy focuses on renewable energy technologies and the electronics involved in producing and converting solar and wind-powered energy. Through hands-on labs, demonstrations, and student-driven projects, students will learn key electrical principles such as voltage, current, and resistance, as well as practical skills like wiring, safety in household energy systems, and converting DC voltage to AC voltage for power grid integration. Students will build and test simple circuits using electronic instruments, gaining a solid understanding of electronic components and systems. To deepen their knowledge, each student will complete a project or research paper focused on renewable energy innovations or electronic applications in clean energy. This course prepares students to be future innovators in sustainable energy and infrastructure.

Advanced Biology

SCI 400, Full year

A lab science course for students who have the desire to explore advanced biology topics at the advancing and excelling level. This course will focus on topics at the intersection of molecular biology, ecology, microbiology, genetics, biochemistry, physiology, biotechnology, and developmental biology. Prerequisite: Life science, Biology. Standards Assessed: Heredity & Evolution AD.

AP Chemistry, formerly Advanced Chemistry

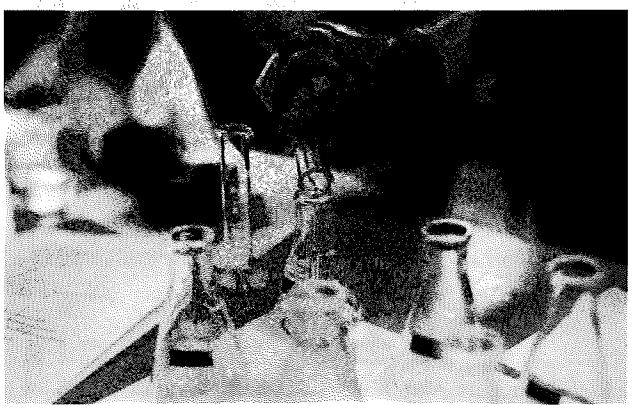
SCI 405, Full year

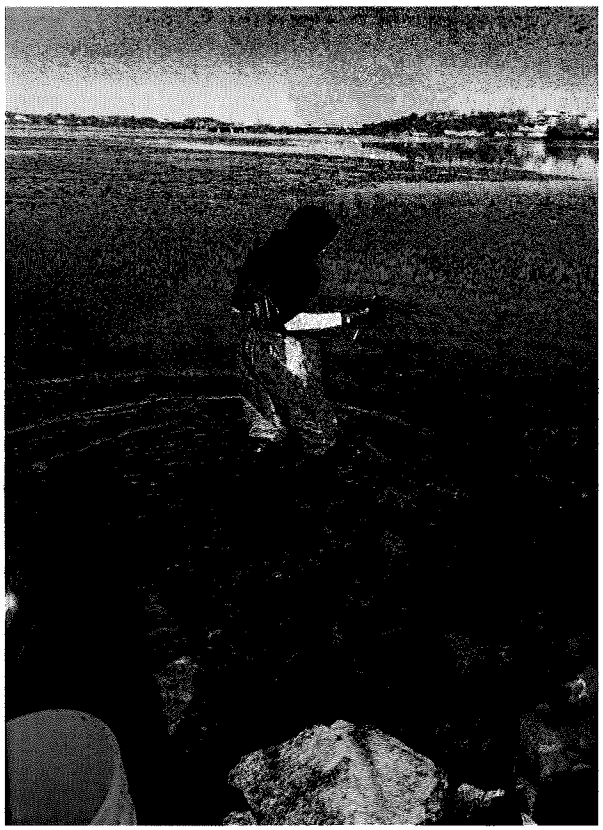
This course offers students a college-level foundation to prepare them for more advanced chemistry studies. Through inquiry-driven investigations, students deepen their knowledge in areas such as atomic and compound structure, properties of substances and mixtures, chemical reactions, kinetics, thermochemistry, equilibrium, acids and bases, thermodynamics, and electrochemistry. To enroll, students must have completed an introductory high school chemistry course(Chem I) and Algebra II, or a comparable course. A significant component of this course involves laboratory work, accounting for 25% of class time, where students engage in hands-on experiments, with at least 10 labs, including six inquiry-based investigations, to demonstrate key chemistry concepts and apply scientific practices.. Standards Assessed: AD Matter & Energy.

Calculus-Based Physics

SCI 410, Full year

A calculus-based physics course aligned to the first semester of a college physics course. The focus is on solving challenging mechanics problems, to prepare students to be successful in a first-year college physics course. The course will include some labs, with an emphasis on error analysis. Prerequisite: Calculus and CB in Forces & Motion. Standards Assessed: AD/EX in Forces & Motion.





These classes below are for Class of 2028 and older.

Biology I & II

SCI 350, Full year

A lab course focused on the fundamentals of Biology. Topics that will be covered include cellular structure, genetics, inheritance, natural selection in populations and ecosystems, and interactions between these systems. Standards Assessed: AD in Heredity & Evolution and Climate & Earth Systems, CB in Statistics.

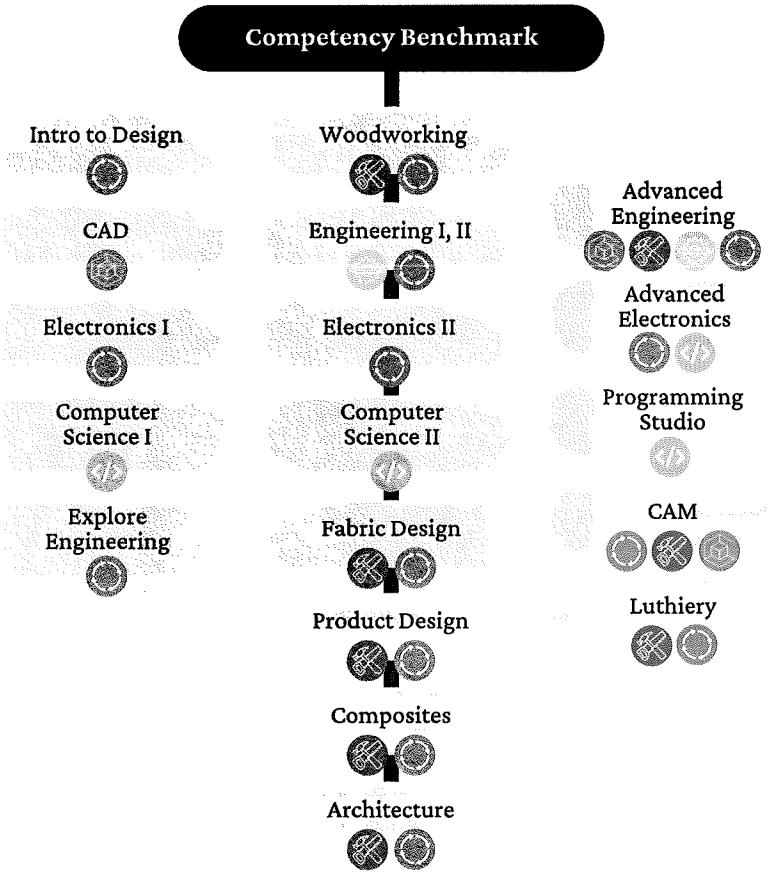
Chemistry I & II

SCI 361, Full year

A lab course focused on the basics of chemistry. The course will cover ionic reactions, stoichiometry, electron configurations, precipitation reactions, models of the atom, and periodic trends. This course continues onto nuclear chemistry, thermodynamics, kinetics, and predicting the products of reactions. Students will conduct demonstration, inquiry-based, and student-led lab investigations in Chemistry. Standards Assessed: CB-AD in Matter & Energy and Climate & Earth Systems.

Design: Comp Sci, Engineering, Fabrications

Baxter's design department is committed to preparing students with the skills and knowledge to be successful in college and career. Student work centers around two foundational goals: to creatively solve open-ended problems and to be prepared with real-world skills that go beyond the classroom. Whether creating a circuit board, writing software, or designing a robot, students learn the core skills to succeed in a constantly changing world.



Design Standards

- Design Process
- Engineering
- CAD
- Computer Science
- Fabrication

The Design Process

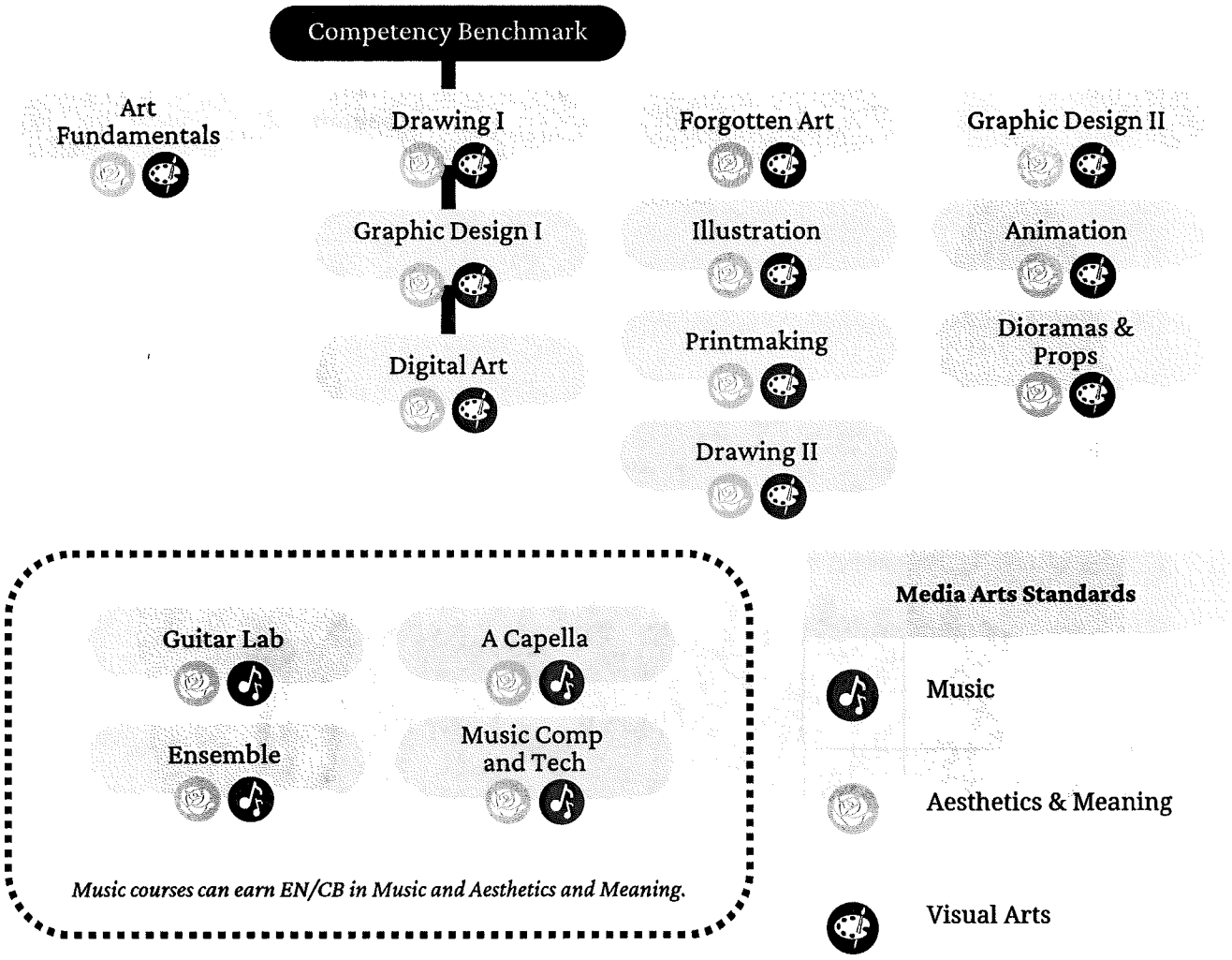
Baxter Academy is a unique school in that the design process is a standard for graduation. We use a model of the design process developed by Stanford's D school as a method for teaching critical thinking, divergent and convergent thought, human-centered design, and prototype fabrication.

Teaching Creative Problem Solving

Our curriculum and the design process provide students with a way of breaking down the creative problem process into modes of divergent and convergent thought. We solve problems by inferring and observing problems and then create multiple solutions before landing on the final designs.

Design: Media Arts

The Visual and Performing arts classes focus primarily on the Aesthetics and Meaning standard. All students experience art and learn to apply the elements of design in an Art Fundamentals course and then dive into deeper meaning through higher-level courses. Students may also choose to experience art through music classes where they learn to perform, respond to others, and compose original music.



Project-based learning is the basis for almost all assignments in the Design department. The curriculum is often formulated around students' interests. Although there are times in a class like Intro to Design where all students are asked to create a wooden letter to teach hand tool use, even the intro classes are soon asked to design and build a model of a chair. Students start with a blank sheet of paper, interview chair users, make observations, measure or research ergonomic constraints, etc. The end result is a class with 20 students and 20 versions of a chair.

Baxter Makes Space for Inquiry

S	P	A	C	E
What stories are at play here?	What possibilities are here?	What assets do I bring?	How does this impact the community?	What engages my curiosity?

Baxter Academy for Technology and Science is committed to providing an equitable learning community for its students and all of its members. We value diversity in all its forms, including but not limited to linguistic, ethnic, ability, family structure, gender, race, religion, sexual orientation, and socio-economic status. We help students develop an understanding of their responsibility as active citizens in a multicultural, democratic society. Through our students, our school is an agent of change; our school is an equity project that seeks to interrupt and transform systemic inequity toward a more loving, just, equitable, and peaceful world. This critical work is the ongoing responsibility of every member of our community.

Media Arts

Art Fundamentals
ART 100
An introduction to visual arts concepts and practices. Focus is on a half semester of analog art and a half semester of digital art. Standards Assessed: EN in AM & VA

Graphic Design I
ART 300
Explore the fundamentals of graphic design including shapes, color, texture, typography, and imagery, and then use this to produce original commercial work. Standards Assessed: CB in AM & VA

Drawing I
ART 305
Detail-oriented course in both the technical and creative aspects of drawing practices. Assignments are based on the principles of design. Prerequisites: EN in Visual Arts and Aesthetics and Meaning. Standards Assessed: PR/CB in AM & VA.

Graphic Design II
ART 306
Through advanced exploration of the designer-audience relationship, students will develop type, logos, and layouts for specific purposes, including branding and packaging. Prerequisites: CB in Graphic Design I. Standards Assessed: CB in AM & VA.

Digital Art
ART 307
Students will develop a high level of proficiency with Adobe Suite products and produce multiple, original pieces demonstrating their knowledge and ability. Standards Assessed: CB in AM & VA.

Illustration
ART 320
Curriculum focuses on interpretation of existing text or material in a visual presentation with consideration to the author's vision. Prerequisites: CB in Drawing I. Standards Assessed: CB in AM & VA

Drawing II
ART 401
Advanced instruction on observational and design drawing practices, and encourages independent development toward and area of interest. Prerequisites: CB in Drawing I. Standards Assessed: CB in AM & VA

Printmaking
ART 402
Covering monoprints, relief prints, gelatin prints, intaglio, collagraph and reduction printmaking. Prerequisites: CB in Drawing I. Standards Assessed: CB in AM & VA.

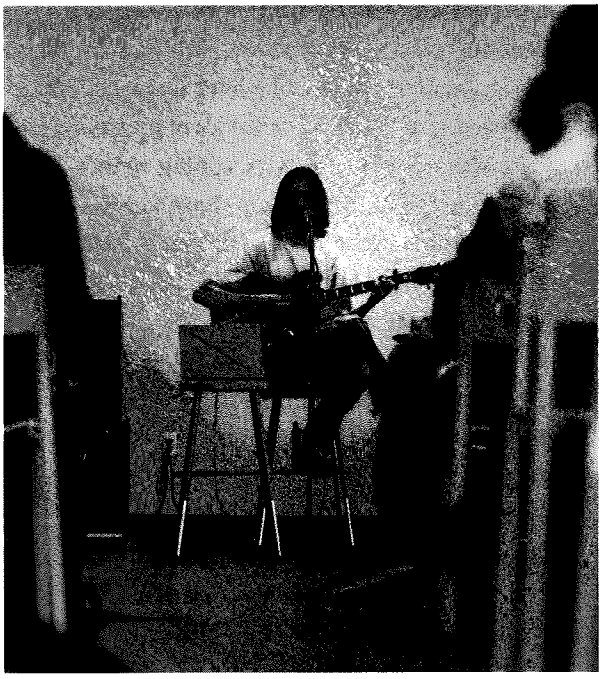
Forgotten Arts
Art 404
This class is based on skills that were once common but are now quickly disappearing, such things as calligraphy, bookbinding, embroidery, stone carving, and other handwork. Students study many disciplines based on regional histories and multicultural art mediums from around the world. Outside experts will support different cultural art forms in live demonstrations for the class. Standards Assessed: AD in AM & VA.

Prop Making & Dioramas
Art 405
This is a class in designing, constructing, and painting both miniature dioramas as well as full-scale objects that fit into the "movie prop" category. Creations would involve careful study of images and other objects to be replicated in different materials that would be indistinguishable from the real thing. Students would have the chance to build from their imaginations as well as have a physical piece to show at the end of the class. These pieces could be purely sculptural in nature or incorporated into film or theater projects or even in tabletop games such as Dungeons and Dragons or other miniatures-based games. Standards Assessed: AD in AM & VA.

Ensemble

MUS ENS

Students pursue an instrument of their choice and participate in a musical ensemble to learn songs together and perform for the school and possibly outside audiences. Our ensemble will explore various genres of music; anything students are passionate about performing. We welcome guitarists, keyboardists, violinists, DJs, singers, and drummers. Students will need to provide their instrument & gear for this class. Standards assesed: EN-CB Music and Aesthetics and Meaning.



Guitar Lab

MUS GUI

Students will receive guidance and direction in a creative problem solving related to playing the guitar at a beginning level and will learn many of the different styles, skills and techniques required to become a successful guitarist. No previous guitar experience needed. Areas of concentration include: correct posture, chart reading, aural skills, rhythmic patterns, chord study, musical forms, improvisation, and performing experiences. Standards assessed: EN-CB Music and Aesthetics & Meaning

Music, Comp, & Tech

MUS MCT

introduction music composition using a Digital Audio Workstation (DAW). Students are guided through a series of increasingly complex projects, putting music fundamentals into practice while building a portfolio of work. No musical experience is necessary for this course. Course may be repeated in order to work on more complex projects and topics. Standards assessed: EN/CB Music and Aesthetics & Meaning.

Music, Comp, & Tech II

MUS MCT

MCT II is a continuation of MCT I. Students are guided through a series of increasingly complex projects, putting advanced music fundamentals into practice while building a portfolio of work. MCT I is a necessary prerequisite for this course. Course may be repeated in order to work on more complex projects and topics. Standards assessed: EN/CB Music and Aesthetics & Meaning

Computer Science

Computer Science I

COS 201

Designed for students who have no prior coding experience. It teaches the basics of programming logic, discrete mathematics, coding syntax, and structure. Students will learn how to write and debug simple procedural programs which will build the skills needed for higher-level programming. Standards Assessed: PR in CS

Computer Science II

COS 301

Extends the basics of programming, including data structures, file I/O, and object-oriented programming (OOP). Students will build up the skills needed for higher-level programming and be prepared for the AP Computer Science A Exam. Standards Assessed: CB in CS

Programming Studio I

COS 302

Self-directed projects with a focus on using the tools and techniques of professional programming. Standards Assessed: AD in CS and CB in DP

Programming Studio II

COS 302

Self-directed programming with opportunities to lead group projects. Standards Assessed: AD in CS and AD in DP

Information Technology I

COS 304

Learning the science of computers, operating systems, and the internet. Hardware, client-server, cloud. Standards Assessed: CB in DP and CS

Information Technology II

COS 404

Advanced topics in the science of computers: networking, encryption, with potential road to certifications. Standards Assessed: AD/EX in DP and CS.

Fabrication

Woodworking

DES 321

Self-directed projects focusing on the design process and understanding woodworking joinery and tools. Standards Assessed: CB in DP and F.

Mechanisms

DES 322

Self-directed projects focusing on understanding simple machines, mechanical advantage and how things work. Standards Assessed: CB in DP and F

Fabric Design

DES 323

Students will learn to work with fabrics while creating a variety of personal projects from fashion based designs to flexible structures, kites and sails. The course will focus on sketching, patterns as well as computer cut CNC components for more advanced makers. Standards Assessed: CB in F & DP

Product Design

DES 324

A course in Design Thinking, the design process and model making. Students will use the fab lab to create and iterate on their products. Standards Assessed: CB in F, DP, and PR in CAD.

Composites

DES 325

Selff-directed projects focusing on understanding composite structures, tooling and mold-making. Standards Assessed: CB DP and F.

CAM (Computer Aided Machining)

DES 420

An introduction to Computer-Aided Machining : CNC routers, CNC vertical Machining center, Laser engraving and 3d Printing. Standards Assessed: AD Design Process and Fabrication, CB E and AD in CAD.

Luthiery

DES 421

Musical instrument construction and repair as well as other advanced woodworking techniques. This course runs every other year. Standards Assessed: AD in Design Process and AD in Fabrication.

Design Foundations

Introduction to Design

DES 200

An introduction to the Design Thinking process, engineering, and fabrication concepts and practices. Standards Assessed: EN in Speaking & Listening and PR Fabrication, PR in the Design Process.

CAD

DES 206

In this class, students learn how to use CAD and how to unitize it as a Design Tool. Students start by learning foundational tools, and then move on to more creative design problems. Students also learn the fundamentals of Euclidean geometry through design projects that use CAD. Standards Assessed: PR in CAD.

Engineering

Explore Engineering

DES 205

How to use engineering tools and principles to understand the world around us. This class is for students who want to understand the technology around us and to practice the engineering mindset. Standards Assessed: PR Engineering, Design Process.

Engineering I & II

DES 300, Full year

Students will learn to work through larger engineering problems. To solve these problems, students will have to apply the design process. They will learn a variety of design tools including CAD, Excel, and 3D printers. In semester 2 the problems will also explore micro-controllers and basic programming. The course will culminate in a final project where students develop solutions for a real world problem. Prerequisites: CAD, Intro Des. Standards Assessed: CB in Engineering, Design Process., CB CAD.

"One of the huge positives of Baxter is the diversity of the student body and faculty despite the homogeneous nature of Maine. In addition, by allowing students greater independence in their educational opportunities Baxter is fostering self direction, self empowerment and the importance of collaboration."

-Baxter Academy Parent

Advanced Engineering

DES 500, Full year

The class centers around preparing students for college-level Engineering. We will study college-level problems in the areas of statics, mechanics of materials, etc. Students will work through complex problems that require them to build their design tools using programming and CAD. Students will need an understanding of Calculus. Prerequisites: CAD, Engineering I and II. Standards: EX in Design Process, Engineering.

Electronics I

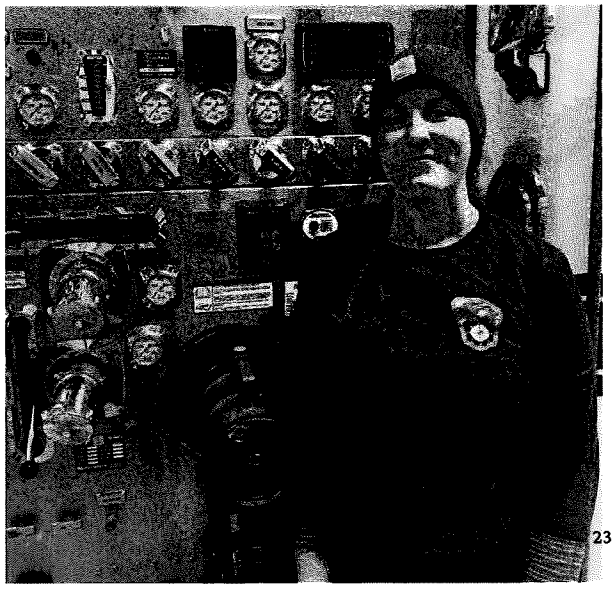
DES 210

Learn basic electronic concepts. Use an online circuit simulator to design, build, and test electronic circuit concepts. Standards Assessed: PR in Design Process.

Intro to Architecture

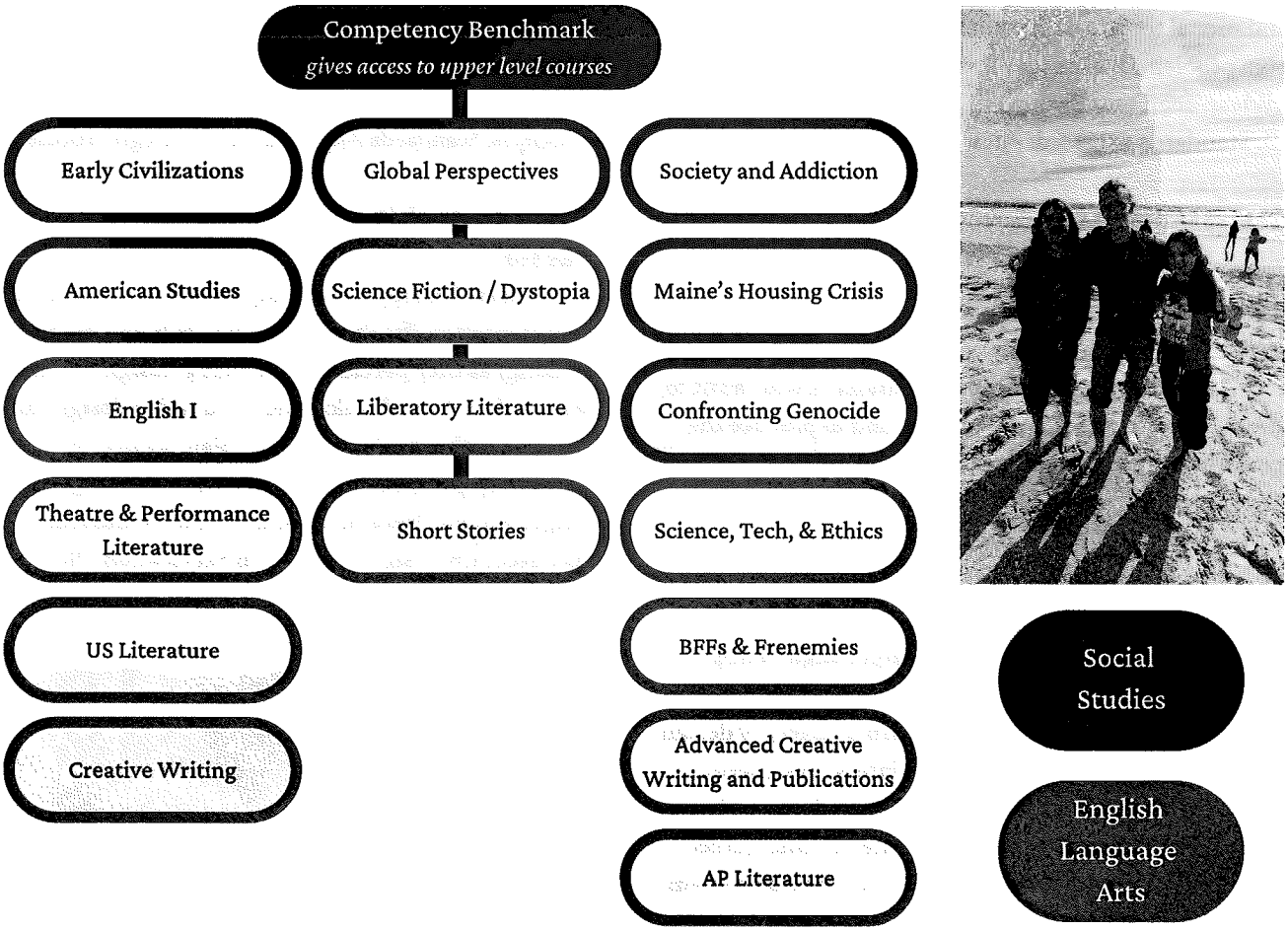
DES 330

This course focuses on techniques of visualization and representation (freehand drawing skills and model making) as they pertain to beginning design. Students will explore form development and refine design skills through orthographic drawing (plan, section & elevation), perspective drawing, model making, and diagramming. Prerequisites: Intro Des. Standards Assessed: CB Design Process, CB Fabrication, PR Aesthetics and Meaning



Humanities

Baxter Academy recognizes and highlights the importance of humanities alongside our STEM mission, acknowledging its pivotal role in cultivating science communicators. Humanities at Baxter fosters a unique approach, emphasizing the development of a human narrative within the realm of science. By analyzing both fiction and nonfiction, students gain a broader perspective and build empathy, using texts as tools to explore and respond to real-world issues. Baxter scholars actively engage with their peers through student-driven discussions and build community as they hone their written and spoken communication skills. Our humanities courses facilitate rich exploration of history and culture so that students can assess how the past has shaped the world they live in today, how historical forces and systems impact their lives and the lives of others, and how they can bring about change.



"Because of humanities at Baxter, I became more empathetic as a writer... and learned how to better write about myself. Because of humanities at Baxter I can put my math skills to use in the context of my community."
-Baxter Academy Student

English I

ENG 100

Students will address themes related to social contracts and power and work to answer questions about their identities, beliefs, and the formation of societies. Students will master the reading skills of citing appropriate evidence from fiction and non-fiction texts and use the writing process (including outlines and peer revision) to develop claims and formulate well-structured pieces of writing that synthesize big ideas. Students will also participate in multiple whole and small group discussions to learn how to participate in high-level text-based conversations. Standards Assessed: EN in Reading, Writing, and Speaking & Listening.

English II: US Literature

ENG 203

This course offers a rigorous exploration American literature of 20th-century from modernism to postmodernism, analyzing how shifting historical contexts, artistic movements, and media influence the construction of identity and reality. Students will critically engage with literary texts, modern art, and evolving mass media to examine the fluid boundaries between fact and fiction, self and society. Through close reading and analytical writing, they will deconstruct authorial intent, narrative structure, and thematic complexity. Writing assignments will require nuanced argumentation, compelling claims, and well-supported analysis that synthesizes ideas across multiple texts. Additionally, student-led discussions and structured academic discourse will develop students' ability to engage in sophisticated, evidence-based conversations. This course demands advanced skills in Reading, Writing, and Speaking & Listening, preparing students for deep intellectual inquiry and critical engagement with literary and cultural texts. Standards Assessed: PR in Reading, Writing, and Speaking & Listening.

English II: Theatre & Performance Literature

ENG 204

This course combines traditional literature studies with a deep dive into performance art, theater, and media analysis. Students will explore classic and contemporary works, with an emphasis on plays, screenplays, and multimedia texts, analyzing how themes, characters, and settings are brought to life on stage and screen. Through reading, performance, and discussion, students will examine the power of storytelling across various media, gaining an understanding of how choices in performance and production impact the meaning of a work. Projects will include performing scenes, writing screen places, and analyzing media to foster skills in critical thinking, creative expression, and media literacy. Standards Assessed: PR in Reading, Writing, and Speaking & Listening.

English II: Creative Writing

ENG 260 is an elective; ENG 203 or 204 are required

In this course, students will learn the craft of creative writing. Students will be expected to produce and share their own original work, and analyze and consider how published poets and fiction writers effectively use literary devices. The course will primarily focus on the genres of poetry, the short story, and flash fiction. functions as well as other topics as time allows. Prerequisites: English II.
Standards assessed: PR/CB in reading, writing, S & L

English III: Short Stories

ENG 300

In this course, we will be exploring short works as both readers and writers. Through short works, such as short fiction, personal narratives, opinion pieces and more, we will explore how writers use literary tools to shape the tone and meaning of their works. As we use our reading as a guide to investigate how author's employ literary techniques, we will work on strengthening our own writing. English II. Standards Assessed: CB Writing, Reading, and Speaking & Listening

English III: Utopia Dystopia

ENG 301

This course provides a rigorous, analytical exploration of social awareness, systemic structures, and individual agency through the study of Science Fiction and Dystopian/Utopian literature. Students will critically examine how perspective shapes historical narratives, literary formation, and social relationships while engaging in close reading to deconstruct an author's craft, structure, and thematic intent. Writing assignments will demand sophisticated reasoning, strong claims, and well-supported arguments that synthesize insights across texts. Through student-facilitated Harkness discussions and structured text-based discourse, students will refine their ability to engage in nuanced, evidence-driven conversations. This academically demanding course assesses advanced skills in Reading, Writing, and Speaking & Listening.

English III: Liberatory Literature

ENG302

Through diverse texts and videos, we will consider how communities struggle against forces of oppression and colonization. Assignments will include literary analysis, personal and creative writing, short presentations, and seminar-style discussions. Formerly Multicultural Literature. Standards Assessed: CB Writing, Reading, and Speaking & Listening

English III: Myth and Modernity

ENG 305

Through an examination of Ancient Greek mythology and modern retellings, students will work to understand how ideas from ancient literature persist in the stories we tell today. Students will search for throughlines of significance and reflect on how stories and myth reflect aspects of our own experience. We will explore how various forms of storytelling impact how we engage with a story's ideas and interrogate what it means to define "classics" and myths. Standards Assessed: CB Writing, Reading, and Speaking & Listening

English III: Advanced Creative Writing and Publications

ENG 360

In this course, students will continue the work of crafting creative writing. In word, sound and image, students will critique and create digital narratives to inform and inspire our community. Students will practice a range of approaches such as podcasting, animation, and video production for publication in and out of school through The Baxterian, Baxter Buzz, Blunt Youth Radio, the NPR podcast challenge, and other publications. Prerequisites: Creative Writing I.

English IV: Science, Tech, & Ethics

ENG 401

Students will address themes related to their social and ethical impact and address questions about their rights, responsibilities, and responses to pressing issues in today's world. Students will read personal essays as mentor texts, work to develop their unique voices, and use these experiences to write their own, original narratives. Then, students will read and discuss non-fiction texts related to current science and technology issues. Students will engage in close reading practices, expanding upon their knowledge of craft, structure, author's purpose, and theme. Students will plan and lead text-based discussions. Standards Assessed: CB/AD in Writing, Reading, and Speaking & Listening, with Research option.

English IV: Literary BFFs and Frenemies

ENG 403

In this survey course, students will explore literary eras through the friendships and rivalries of great authors. We will delve into the writing communities that shaped each period and investigate how interpersonal relationships influence artistic movements. Along the way, we may find the answer to such questions as: How did Emerson's and Thoreau's friendship lead to the transcendentalism that revolutionized American literature? Who didn't Hemingway have beef with? Were the Brontës just jealous of Jane Austen's success? How did these feuds affect society's impression of these authors and how can our friendships shape the future of literature? Prerequisites: English I, 200 level English, 300 level English. Standards Assessed: CB, AD, EX in Writing, Reading, and Speaking & Listening with Research option.

English IV: AP Literature and Composition

ENG 404

AP Literature and Composition is a rigorous, college-level course designed for students who are passionate about reading, analyzing, and interpreting complex literary texts. Through an intensive study of fiction, poetry, and drama from various time periods and cultures, students will develop advanced critical thinking, close reading, and analytical writing skills. Emphasis is placed on deep literary analysis, sophisticated argumentation, and precise, evidence-based writing. Students will engage in thoughtful discussions, timed essays, and intensive revision processes to refine their style and clarity. This demanding course prepares students for the AP exam and for the intellectual challenges of college-level literary study. Prerequisite: English III. Standards Assessed: CB/AD in Writing, Reading, and Speaking & Listening. Optional - Research

Social Studies I: Early Civilization

SOC 100

Thocial is course will focus on basic research and the introduction to historical thought. In addition, students will understand how early societies organized themselves to make decisions, solve problems, and produce goods. Students will do this through the study of early civilizations. Standards Assessed: EN in Civics & Government, Historical Thinking, and Economics.

Social Studies II: American Studies

SOC 200

This course will focus on the analysis of historical documents and founding ideals of the United States. In addition, students will examine the American experience from the perspective of groups that historically lacked access to power/resources. Standards Assessed: PR in Civics & Government, Historical Thinking and Economics. *This course is a ME state requirement*.

Social Studies III: Global Perspectives

SOC 300

Students in this course will expand their skills with historical thought and advanced research. Students will focus on the global transfer of goods and wealth and the political implications thereof. Standards Assessed: CB in Historical Thinking, Research, Economics, and Civics & Government.

Social Studies IV: Society, Addiction, and Violence

SOC 415

Students will explore the biological and environmental factors of addiction and violence. We will look at how global, US, and local policies impact a society's addiction and violence burden. Standards Assessed: AD/EX Civics and Government and Historical Context.

Social Studies IV: Personal Finance

Math 355

The focus of this course is understanding the events in each student's life that will impact them financially. Students will use algebraic and graphical analysis to assess their costs, their sources of income, and how to build a solid financial future. Major projects for this course will focus on understanding job markets and the costs and benefits of college, creating and managing a budget, and planning for taxes and retirement. Students will practice algebraic thinking and create, use, and interpret linear and exponential functions as models for financial situations. Prerequisites: CB in Algebra. Standards Assessed: CB for Research and Economics, CB in Functions.

Social Studies IV: Civics In Action

SOC 405

We will study the rights and responsibilities of people living in, or impacted by the institutions of, the USA, in theory and practice. We will explore identity, power, privilege, and community, working towards learning how we can interact with our political, social, environmental, and economic systems to affect change. Standards Assessed: AD in Historical Thinking, Research, Civics & Government, and Economics.

Social Studies IV: Confronting Genocide

SOC 455

This course will introduce students to the genocides of the 20th century. Students will explore four genocide case studies: Armenian, the Holocaust, Cambodia, and Rwanda to understand the genocides, their historical context, and the U.S. and international responses to the genocides. Additionally, students will explore the treatment of Native Americans in the United States as a means of learning about the concept of cultural genocide.? This foundation will provide a historical lens as students analyze possible genocide policies and present their solutions to confronting genocide. Standards Assessed: CB/AD Civics & Government and Historical Context.

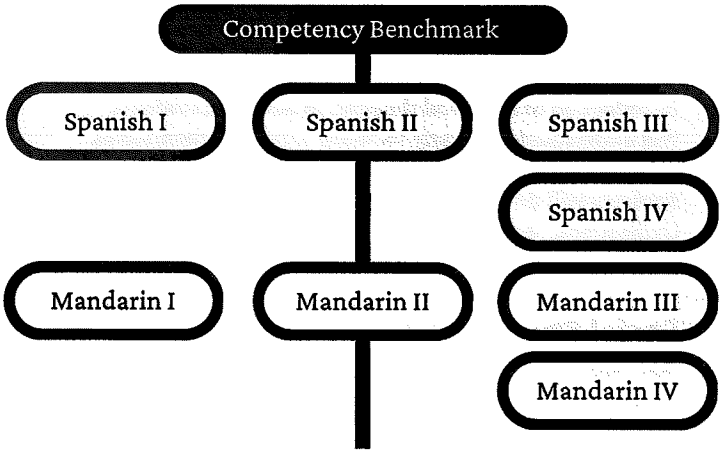
Social Studies IV: Maine's Housing Crisis

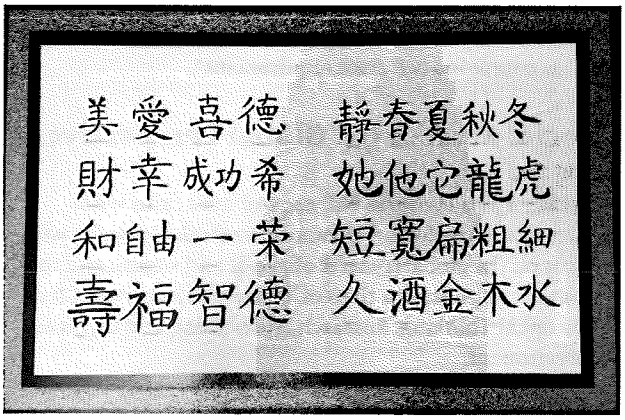
SOC 456

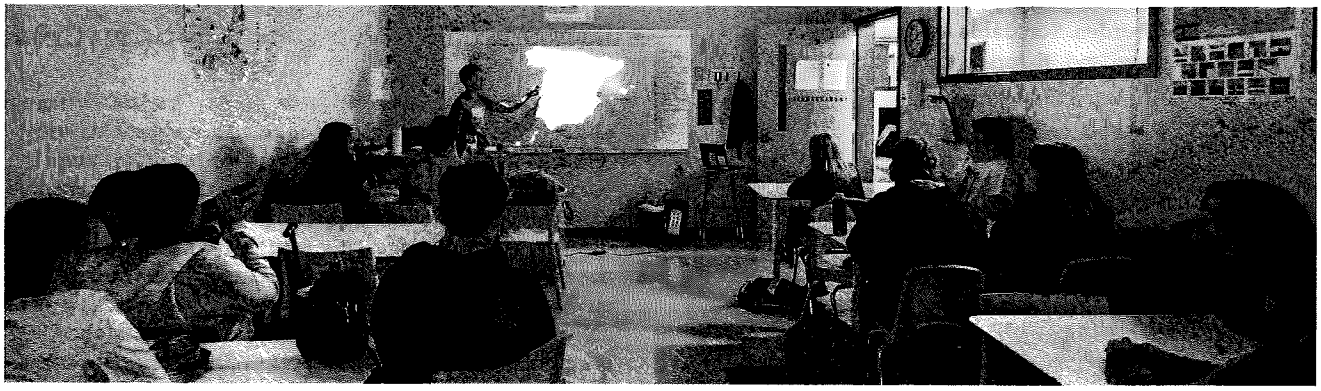
Portland, Maine is in the midst of a housing crisis. This is a data and research course designed to familiarize students with research methods, data analysis and visualization, and presentation skills. Students will apply these research and data skills to develop an understanding of the housing crisis, one of the biggest challenges facing Portland and many other parts of the state and country. This course emphasizes the collection and analysis of both quantitative and qualitative data, as well as collaboration between our Baxter community and the government agencies, social services providers, nonprofits, advocates, and residents of the wider Portland community. What are the causes of this housing crisis? What are its impacts on individuals, families, institutions, and communities? Prerequisite: American Studies. Standards assessed: CB-EX in humanities.

World Language

Studying a world language alongside STEM provides our students with the tools to communicate and problem solve across the globe. By learning another language, students build empathy for others, allowing them to understand and address global issues with their skills in innovation. Baxter?s world language educators recognize the responsibility of preparing our students to enter college and the workforce as empathetic and informed global citizens within our home communities and around the world. As such, language classes at Baxter are built using the latest research in language acquisition and informed by the proficiency levels put forth by the American Council for the Teaching of Foreign Languages (ACTFL).







Mandarin Beginner (Mandarin I)

MAN BGN, year long

Introductory course for beginners emphasizing developmetn of active language learner skills. Students will become familiar with the sound landscape and cultivate a comfort with the unique intonation. Class is desinged using comprehensible input (CI) prioritizing language acquisition over traditional study of grammar to help students acquire language naturally rather than learning it consciously. Standards assessed: PR in Interpersonal and Interpretive Communication.

Mandarin Elementary (Mandarin II)

MAN ELE

Continuation of language acquisition through cultural awareness. Class blends authentic materials and discussion on topics relating to the Chinese speaking world. Students develop a famliarity with listening and responding in the target language and continue to hone their active language learner skills. Standards assessed: CB in Interpersonal, Interpretive, and Presentational Communication.

Mandarin Intermediate (Mandarin III)

MAN INT

Course for motivated learners accessing deeper understanding of language and culture. Through frequent references to current events, social movements, and cultural traditions, students explore a deeper appreciation of the speakers of the language and the language itself. Standards assessed: AD in Interpersonal, Interpretive, and Presentational Communication.

AP Mandarin, formerly Mandarin Upper-Intermediate (Mandarin IV)

MAN AP was MAN UP, year long

This nuanced course emphasizes student-driven topics, allowing learners to guide discussions while exploring authentic materials related to complex cultural issues and current events. Standards assessed include Interpersonal, Interpretive, and Presentational Communication (EX).

Spanish Beginner (Spanish I)

SPA BGN, year long

Introductory course for beginners emphasizing the development of active language learner skills. Students will become familiar with the sound landscape and cultivate comfort with the unique intonation. Class is designed to be comprehensible (CI) prioritizing language acquisition over the traditional study of grammar. This method helps students acquire language naturally rather than learning it consciously. Standards assessed: PR in interpersonal and interpretive communication.

Spanish Elementary (Spanish II)

SPA ELE

Continuation of language acquisition through cultural awareness. Class blends authentic materials and discussion on topics relating to the Spanish-speaking world. Students develop a familiarity with listening and responding in the target language and continue to hone their active language learner skills. Standards assessed: CB in Interpersonal, Interpretive, and Presentational Communication.

Spanish Intermediate (Spanish III)

SPA INT

Course for motivated learners accessing a deeper understanding of language and culture. Through frequent references to current events, social movements, and cultural traditions, students explore a deeper appreciation of the speakers of the language and the language itself. Standards Assessed: AD in Interpersonal, Interpretive and Presentational Communi cation.

Spanish Upper-Intermediate (Spanish IV)

SPA UP

Nuanced course incorporating an emphasis on student-initiated topics of study. Student choice drives the direction of discussion while exploring authentic materials on complex cultural issues and current events. Standards Assessed: EX Interpersonal Interpretive, and Presentational

Online Learning of World Language Options possible as electives upon completion of in-person language learning: Arabic, Dutch, Filipino, Greek, Hebrew, Hindi Irish, Japanese, Korean, Latin, Persian, Polish, Portuguese Russian, Swed ish, Turkish

Health at Baxter Academy

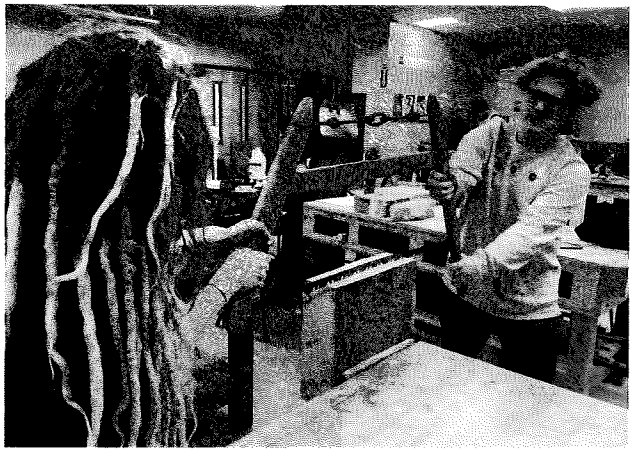
Guided by the Maine Health Learning Standards, we at Baxter partner with local organizations such as Boys to Men and Prevention-Action-Change, to provide rich and interactive programming. Students are connected to our community health partners through our advisory program. In addition to meeting these standards through community partnerships, a lot of work happens in the classroom as well. Students work on long and short term goals, increase self advocacy skills, and reflect on their learning during Flex Friday and student led conferences.

Baxter students are engaged in a health and wellness program through a multi pronged approach. Advisory serves as a micro community anchor for small groups of students.

External partnerships play a role in the general education of all students and also play a role for higher need students who need special care. The culture of academics and educator orientation play a large role in the ongoing health and wellness of our students.

The school counseling program offers educational preventative programs, goal setting, as well as responsive programs for student care There are many outside influences and barriers facing our students today. There will be small group discussion and curriculum with advisor and counselors including digital citizenship and conflict management .

Health Connections & Influences	Decision Making & Goal Setting	Physical Fitness Knowledge

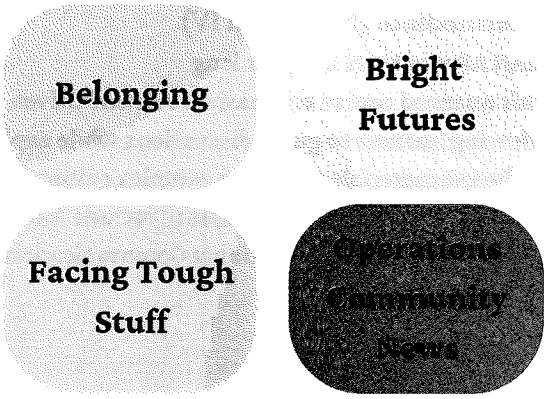


Advisory

At Baxter, students find a supportive and caring adult and a community of other students in advisory. Baxter students enroll in Advisory, a pass fail course, for every year they are Baxter students; 9th and 10th grade focuses on executive functioning, self awareness and community building while 11th and 12th will focus on college and career planning. At Baxter we believe deeply in the power of community. Students join a group of their peers and an adult advisor and stay in their advisory group for all four years at Baxter.

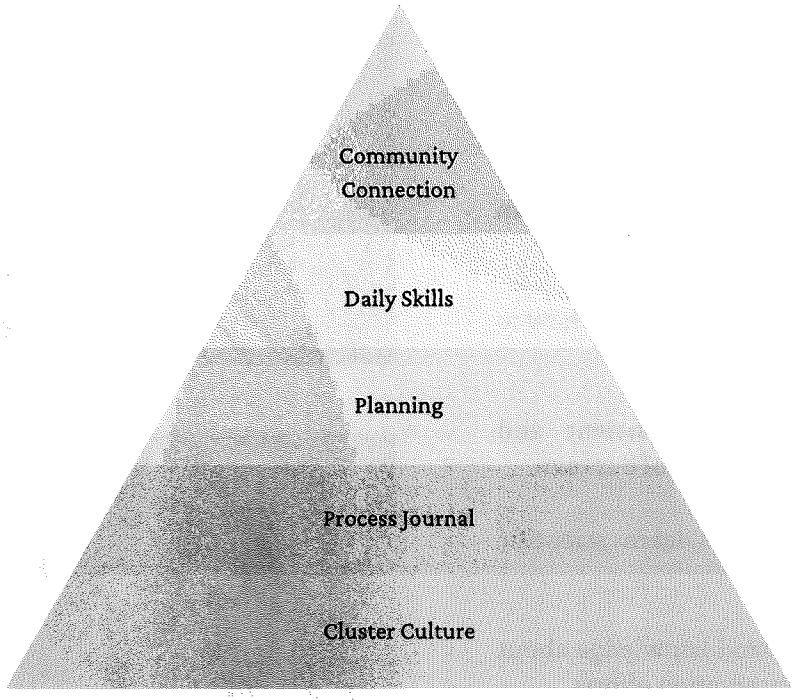
We live out our advisory mission by consistently revisiting the weekly structure below.

- Mondays: Students log into PowerSchool to check their grades and set goals around their academic performance. This is a chance for advisors to work closely with students to meet their own academic goals.
- Tuesdays: Students have Intervention and Enrichment. This is a time for them to meet with teachers to get extra support or enrichment in their classes. Students also get study hall time in an advisory.
- Wednesdays: Culture and current events are on focus. Here, we tap into the events happening in Maine, the United States, and around the world. We also have Town Halls on Wednesdays, where the whole school joins together to acknowledge and celebrate each other's accomplishments.
- Thursdays: Students meet with their Flex Friday coach to set goals for Friday.
- Friday: The curriculum focuses on health and wellness. We learn about various elements of health and well-being and reflect in our wellness journals and with our advisory group to set goals about our health and wellbeing.



01 BA for Technology and Science

Flex Friday at Baxter



Critical Elements of Flex Friday Success

Although every project is unique, there are unifying threads across all cohorts and projects. The Flex Friday pyramid visualizes key components necessary for every project.

Flex Friday Projects are student-inspired and managed, educator-coached, long-term work. Proposals are presented to a hearing committee for approval. Projects must be ethical, STEM-related and meet a community need; the goals, objectives, and schedule proposed must indicate a pathway to success. Students earn a 1-4 grade, included in the student's GPA.

Community Connections: The project meets an identified community need. Relationships with community partners are nurtured, and authentic audiences or stake holders are identified and included

Daily Skills: Students hone specified skills that are transferable to long-term goals beyond project. Eg: CAD, interviewing skills, lab skills, graphic design, programming, carpentry, editing, social and emotional skills, etc.)

Project Planning: Goal setting, charting progress, breaking down tasks, establishing deadlines, choosing and implementing specific strategies, monitoring and adjusting to solve problems

Process Journal: Weekly intentional reflection on process. Students note progress towards goals, skills acquisition, group work challenges and successes, as well as other discoveries using a consistent platform

Cluster Culture: Presence, accountability, and adherence to coach expectations contribute to a positive cluster culture. Consistent productive student habits, feedback for peers, collaboration and receptivity to coaching also play a role in positive cluster culture

9th Grade Flex Friday Experience

The 9th Grade Experience at Baxter gives incoming students the tools they'll need to succeed in the later years of Flex Friday at Baxter. In service of this mission, students take expeditions in Portland to explore real world challenges and community experiences - in the environment, technology, art, and society. Examples include:

- East End Beach: To measure water quality and microplastics in the sand and ocean.
- EcoMaine: To learn where our trash and recycling go, and how to think responsibly about the waste we create.
- Portland Museum of Art: To learn about ancient and contemporary art, and make some art and poetry of our own.
- Fore River Sanctuary Preserve: To hike and learn scientific documentation practices.
- Wells Reserve & Laudholm Trust: To expand knowledge about coasts and estuaries, while exploring conservation efforts.

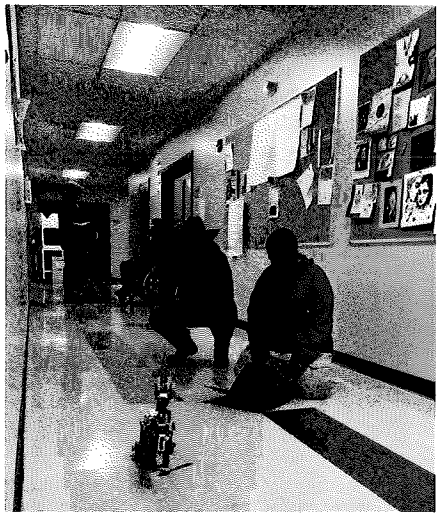
Back on campus, students learn to make and code remotely operated vehicles as a design response to the needs that they've identified in the community.

On Flex Fridays in the Fall, 9th graders students take three classes in these areas:

Writing/Speaking

Community Impact

Project Management



Flex Friday at Baxter

Flex Friday helps students foster skills such as these for students to achieve their goals:

- Innovation
- Academic Rigor
- Time Management
- Responsibility
- Creativity
- Collaboration

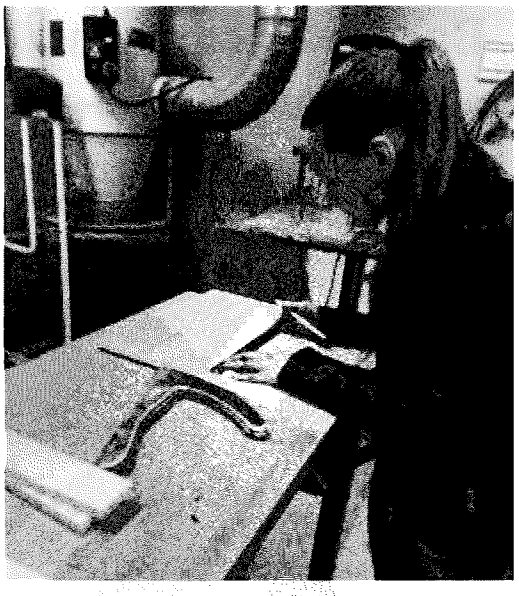
Flex Friday connects students to their community's needs:

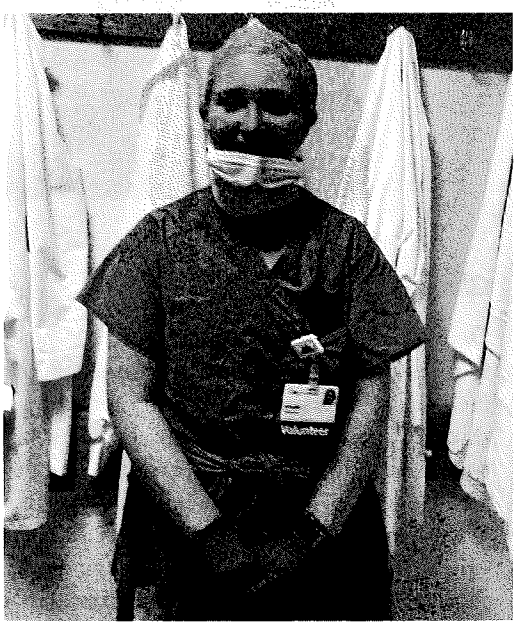
- Connects students to the local and global community.
- Investigation of real-world problems serves as a vehicle for deep learning.

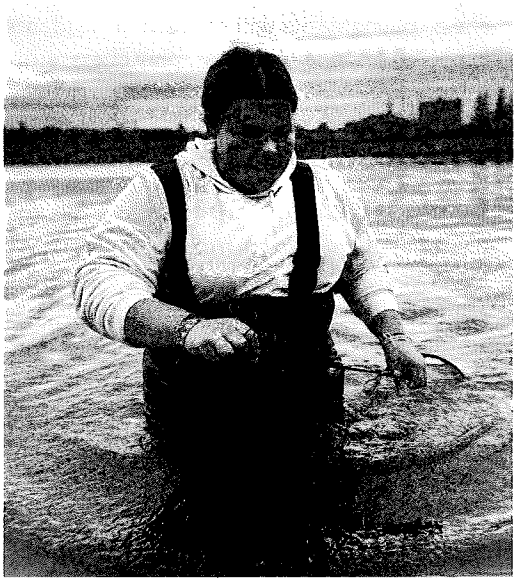
Flex Friday encourages risk-taking and trying something outside of a student's comfort zone. Some of the most exciting learning happens when a student who has tried hard at something new ends up with an unplanned outcome. Success happens when students feel the freedom to make mistakes and try new things. In Flex Friday, students have the freedom to problem solve in nonlinear ways, using multiple possibilities for refining their thinking. These projects invite collaboration, feedback, support, and interdependence.

The Flex Friday Learning Standards are adapted from the Maine Learning Results Guiding Principles and the Baxter expectations. The course provides students with opportunities to grow their skills in the following standard areas:

- Initiative and Perseverance
- Collaboration
- Inquiry and Investigation
- Problem Solving
- Information Processing
- Integration
- Communication
- Reflection
- Civic Awareness







Baxter Academy Chess Program

Baxter Academy offers a unique chess program taught by US Chess Master Majur Jurac from South Sudan. This rare opportunity will engage novice and experienced players alike. Students will have the opportunity to join a global community in a game that is over 1500 years old. While the international chess federation (FIDE) host teams from 180 countries. STEM programmers continue to develop artificial intelligence that can challenge evolving World Chess Masters. This will be an ongoing battle. In 2020, e-sport teams began signing players for the first time.

Chess I

Des700

Students will learn the fundamentals of the game, including increasing concentration and strategic thinking. Students will learn include the basics of coordinates, logic, strategy, executive functioning, and predicting a variety of outcomes. Students will learn rapid decision-making under timed conditions, evaluate alternatives, and learn many ways to win through instruction and opportunities to play opponents in the classroom. The mechanics of official chess tournaments will be learned. Students should expect to learn about chess, play chess, and reflect on their learning across the semester.

Chess II

Des701

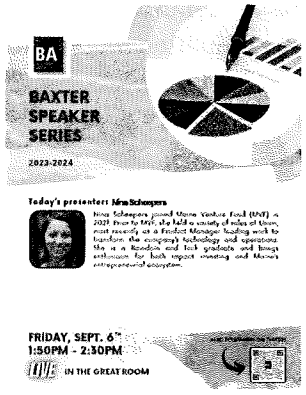
Building on the strategy learning from Chess I. Students should expect to be challenged by their peers in tactical thinking, planning long term strategies, and be capable of challenging their peers in class, in school, or at Baxter Chess Tournaments, If interested, students may be prepared to play competitively in ranked chess matches.

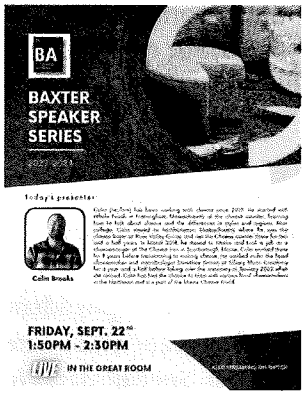
Learning from Experts

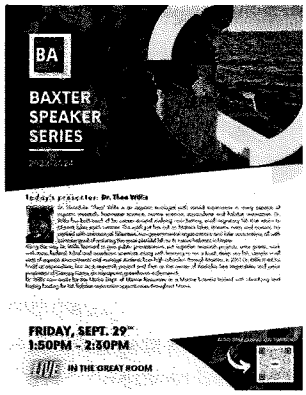
Baxter attracts experts from various STEM fields. Every year, over 35 STEM speakers are brought in for school-wide weekly events, helping to grow our students' professional network. In addition to this, classroom teachers also bring in special speakers. Some classes go on field trips to local industries including engineering firms, universities, art studios, and museums. We offer special courses to enrich student experience outside of the standards track.

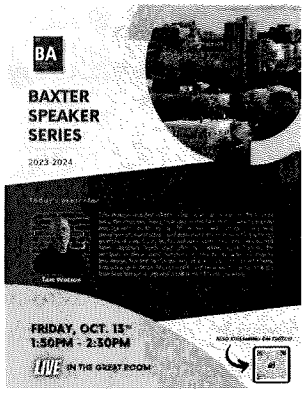
Baxter's Speaker Series

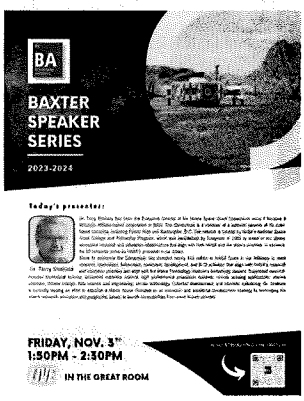
Baxter's motto is "*The real world starts now.*" One of the ways that we try to connect our students with real-world applications of the content and skills that they learn in the classroom is through our Speaker Series. Each Friday during the school year, we host short presentations by individuals and organizations who are doing interesting work that connects with Baxter's STEM mission. Below you will find a sampling of the 2023-2024 Speaker Series presenters who have come to share their insights and experiences with Baxter's students.

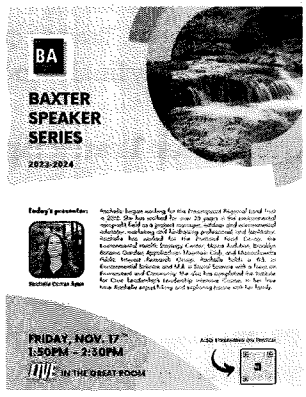


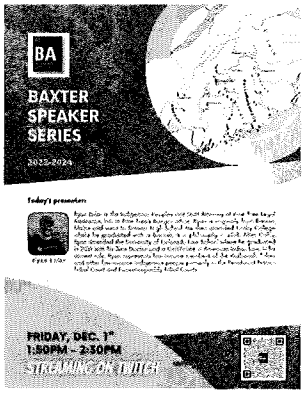


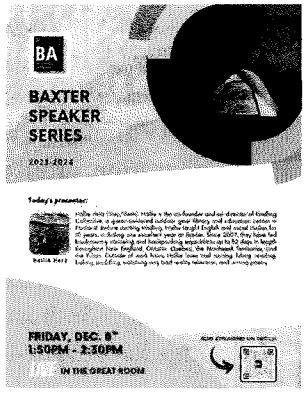












Academic Policy

Academic Integrity

Baxter Academy holds all students to high standards of academic integrity. Our community expects each member to honor the principles of academic and personal honesty and authenticity. The high level of student-led work and collaboration calls on all members to be true to themselves and to those we work with and serve. Much of student work is done not merely for grade books, but for real-world benefit. The bar for ethical and responsible academic contribution is high at Baxter as our student's work holds real value for our community.

Progress reports are issued mid-semester. Semester report cards are issued at the end of each semester. These reports, along with regular educator updates of no less than every two weeks, are used to help students and families stay informed and collaborate with Baxter as needed to support student success. Specific dates for progress reports and report cards will be shared on the school calendar. Transcripts are permanent records and report only final standards and grades.

The Baxter Transcript

The Baxter transcript marks a student's progress on standards and reports student achievement levels in their courses. Additionally, a student's Flex Friday project description, each year, is also reported on a student's official transcript. The GPA is derived from evaluation by course.

GPA

Student grades for each enrolled course are averaged to configure their overall Grade Point Average at the end of each semester. Baxter does not use GPA to report class rank.

Rigor Designation

Baxter courses increase in rigor as a student moves from level 100 to 200 to 300 and 400 and beyond. They are challenged to meet academic standards demanded by higher education and the workplace.

Graduation Requirements

Students will successfully courses to meet proficiency in the standards and indicators of our academic program (competency benchmark at minimum); a third of a student's academic journey consists of core courses and the remaining is uniquely tailored to the student's exploratory and concentration interests, as guided by Baxter mentors and coaches. Baxter's Academic program of studies provides students with the following means to achieve graduation requirements:

-4 years of Flex Friday
-4 years of Mathematics
-4 years of Science
-3 years of Humanities
-1 year of Art
-1.5 year of Design
-1.5 year of World Language
-3 years of electives to concentrate/explore
-4 years of Advisory

Minimum Courses for Enrollment

Students must be enrolled in Flex Friday, Advisory, and 5 courses at Baxter for each semester.

Course Changes

A two-week add/drop period at the beginning of each semester allows a student to fine-tune their academic program without a record on the student's transcript. Students can initiate add/drop by meeting with their counselor, who will investigate approvals with appropriate parties, including sending and receiving teachers, and the department chair. Students are responsible for making up work that they have missed in the first two weeks of the course, as required by the teacher. Without the expressed consent of the administration, after the first progress report is released, a W will appear on a student's transcript for a dropped course and courses may not be added at this time. Students with extenuating circumstances may appeal to the administration to add a course in exchange for a dropped course after the first progress report.

Early College

Juniors and Seniors are eligible to take up to 2-semester college courses per year in lieu of Baxter courses. Eligibility is determined by standards proficiency. College transcripts will be issued along with Baxter transcripts. Early College Courses do not contribute to a student's GPA.

Transferring Into Baxter

Using the new student's sending school transcript, students will be awarded standards and courses as applicable.

Disclaimer Statement

At the time of publication, we made a reasonable effort for the accuracy of information. This publication does not contain all of the policies, procedures, rules, regulations, and academic requirements of Baxter. Changes or additions may be made to policies, procedures, rules, regulations, and academic requirements without prior notice. When an academic requirement is made, it is not made retroactive unless the change is of benefit to the student and is achievable.

FERPA

Baxter acts in accordance with the Family Education Rights and Privacy Act (FERPA). The parent/guardian rights to student records transfer to students once they turn 18 or attend a school beyond high school. Baxter will give full rights under the Act to either parent/guardian unless provided with evidence of a court order, State statute or legally binding document relating to divorce, separation, or custody, that specifically revokes these rights. A copy of such a document will be filed with the counselor in the student's record.

AP Testing

Sign up for AT testing by November. Students are not required to take the AP test if they take an AP class.

Baxter Graduation

Baxter graduates its seniors annually in June. Confirmation of graduation for the following school year begins at the end of a student's junior year first semester, or 18 months in advance of graduation.

Baxter Distinguished Scholars Graduates

Graduating seniors have the ability to earn Baxter Distinguished Scholars designation on their diploma. Applications for Distinguished scholars are due by the end of the second semester of a student's junior year. Students interested in a Baxter Distinguished Scholar designation on their diploma will assemble a portfolio to support their candidacy. For more details, please see Baxter's Head of School or Assistant Principal, with whom rests the final decision for promoting a candidate
to a Baxter Distinguished Scholar.
Distinguished Baxter scholars are those students who have demonstrated strong authenticity, critical thinking, agency, collaboration, voice and leadership in the following four ways.

I. *Competitive external exhibitions* with successful participation (MSSF, Robotics competition, other competitive STEM organization)

II. *Academic Concentration* -demonstrated evidence of concentrated study with significant elective study in the area.

III. *Internship* relevant to their area of academic concentration.

IV. *Demonstrated leadership* for at least 10-12th grade of their years at Baxter; evidence of initiating and participating in leadership.

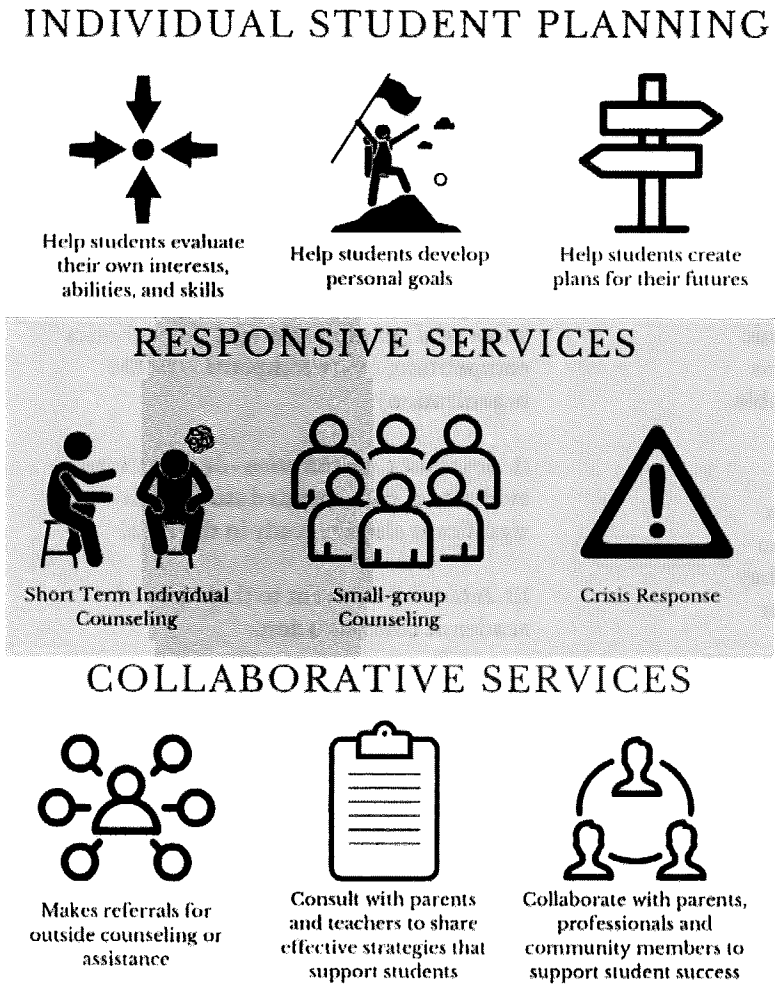
V. *Academics in service* - Student has applied their academic studies, particularly their area of concentration in service hours to their community or a community organization.

"I can genuinely say that coming into the hallways here that my passion for teaching has been re-ignited and I am by far, having the most fun that I have ever had teaching at any school. Period."

- Baxter Teacher

Student Support Services

Your counselors at Baxter are here to help guide you on your next steps after high school. We at Baxter believe there are many different ways to path your success. Although we are a college preparatory school, we also prepare you for the real world. So no matter what your next steps will be, we are there to support and guide you.



College & Career Planning Timeline

9th Grade:
Exploring interests
Meet counselor
Think about life after Baxter

10th Grade:
Meet with Counselor
Take PSATs
Attend College/Career Fairs
Take Rigorous Couses

11th Grade:
Create College List
Take PSATs again
Take SATs
Tour Schools
Attend Info Sessions
Meet with Counselor
Keep high rigor
Junior Meetings

12th Grade:
Senior Seminar
Narrow down List
Meet with Counselor
Take SAT in Fall if needed
Request Recommendations
Complete Applications
Send SAT scores if needed
Receive Admissions Decisions
Deposit!

Early College and College Planning

Students are eligible to take college classes at many Maine Colleges and Universities tuition-free. Eligible students are allowed to take 12 credits an academic year for free each fiscal year (July-June). Students may be responsible for purchasing any books/materials required for their classes. Parental approval is required for registration. Baxter students should achieve (at least) Competency Benchmark in the areas they plan to take college classes in before enrolling in the Early College program. Availability is also guided by prerequisites determined by the college/university at their discretion. Baxter Counselors are available to help with class selection, navigating prerequisites, and the scheduling and registration process. Standards and GPA will not be counted for Graduation Requirements or Baxter GPA. Higher educational institutions will issue a transcript for all classes.

Grading at Baxter

Academic records give us a view of a student's journey and growth. Students and families can access records to view the regular updates provided by educators in PowerSchool. Formal progress reports are issued mid-semester. Report cards issued at each semester's end will be used for transcripts.

evaluation by

course

Students earn a grade for each course based on their progress toward meeting the indicators and standards of the course.

4.0	**Transcends Course Expectations** *The student pushed beyond the expectations and and potentially reached higher standards of the course and added deep personal and community connection.*
3.5	**Better than Meets Course Expectations** *The student is well prepared and well practiced for the next course in the sequence, and may have already exhibited some of the skills or content (standards) expected in the next course.*
3.0	**Meets Course Expectations** *The student is prepared for the next course in the sequence and has met the indicators and standards of the course.*
2.5	**Satisfies Course Expectations with Greater Proficiency** *The student may advance to the next course in the sequence. Student could use greater practice in a skill and/or demonstrate greater knowledge and content mastery in the standards and has shown evidence of all indicators of a standard*
2.0	**Satisfies Course Expectations** *The student is minimally prepared for the next course in the sequence. The student will need to make up some standards in a future class, obliging the student to sign up for another course in the department's sequence.*
1.0	**Does Not Satisfy Course Expectations** *The student is not sufficiently prepared for the next course in the sequence. The student will need to repeat the class.*

GPAs are determined by course evaluations

We use numbers to communicate grades clearly to secondary institutions, students, and families. This is how the rest of the world sees our GPA.

A	4.0		B-	2.7
A-	3.7		C+	2.3
B+	3.3		C	2.0
B	3.0		F	1.0

evaluation by

standard

Student learning is determined by progress toward the standards associated with a course. The level of achievement depends on the complexity of the course (is it an introductory course, or an advanced one?)

EX	Excelling (400+ level course) The student demonstrated a high level of complexity, sophistication, originality, depth, synthesis in application of course.
AD	Advancing (400 level course) The student demonstrated complexity, sophistication, originality, depth, synthesis in application of course.
CB	**Competency Benchmark** **(300 level course)** The student has consistently demonstrated understanding at the level required for all Baxter graduates.
PR	Progressing (200 level course) The student has acquired a deeper understanding of the standard, well on the way to benchmark, but is not quite there.
EN	**Entering** **(100 level course)** The student has demonstrated a basic or introductory understanding of the skills and content of the standard

Students may offer evidence that is **Beyond Assessment (BA)** of rubric expectations. Some students may also earn an evaluation of No Evidence (NE). For 300 level courses the standards target is competency benchmark; a student who earns competency benchmark on standards for a 300 level course would not be assessed lower than a 3 by the end of the course. Likewise, for full year classes.

	EN	PR	CB	AD	EX
100	3				
200		3			
300			3		
400				3	

Graduation is determined by successful completion of course of studies, which holds the appropriate standards.

Mahmuda Alam
Science
Mount Holyoke College

Nicole Anderson
Health
BA U Conn
MPH, USM

Matt Barnes
Media Arts
BA Notre Dame College

Tyler Beaulieu
Data & Enrollment Manager
BA Alfred University

Chris Bertelsen
Humanities
BA Colby College

Emmanuel Billys
Maintenance

Shiho Burnham
Mathematics
BA University of S. Maine
MS University of S. Maine

David Connor
Media Arts & Fabrications
BA University Maine Orono
MAT University S. Maine

Amos Cooper
Information Technology
BA Susquehanna University

Lauren Dickson
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BA, MS, UMaine Orono

Michelle Doherty
Front Office Manager
Mystic Valley Charter School

Matthew Donovan
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U Maine Orono

Leah Douglass
Humanities
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Ernie Easter
Educational Technician
BS University Maine Orono

Debra Gagne
Social Worker
MSW Univ. of Southern Maine

Eli Hersey Powers
Humanities
BA Pomona College

Jasmine Holland
Business Manager
Univ. Maine Augusta

Eric Kawamoto
Computer Science
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MA Harvard University
PhD Harvard University

Emily Kelly
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MEd U Mass Amherst
EdS U Mass Amherst

Anna Klein-Christie
Executive Director
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Charlie Koch
Counselor
BA Trinity College
MS University S. Maine

Dustin LeVasseur
Music & Media Arts
BA University S. Maine
MA Columbia University

Rory Lowe
Science
BA Colorado College

Alan Lukas
Engineering
BS & MS M.I.T.

Laura Parks
Director of Special Ed
BA Wheelock College
MEd University S. Maine

Amber McKenzie
Special Education
BA U Maine Farmington

Peter Moxhay
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PhD U of Minnesota

Wiley Muller
Engineering
BA Univ. of Tennessee
MEd U. Southern Maine

Enyue Li
Mandarin
Shanxi Normal College

Savanna Pettengill
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MS CUNY Brooklyn College

Cicy Po
Head of School
BA Skidmore College
MEd Harvard University
EdD Boston College

Eric Poulin
Special Education
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Golsin Rashid
Science
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Kirkuk, Iraq

Andrew Ritter
Science
BS Hobart College

Jorge Rodriguez
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BS, BA Drexel University
MEd National University

Faith Small
Literacy Coach
UMaine Orono

Lisbet Soria
Spanish
University José Martí de Santi
Spiritus University

Kate Strait
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BA University of NE
MA University of NH

Sunny Stutzman
Fabrication/Design
BA UM Farmington
AS Art Institute of Pittsburgh

Billy Wall
Special Education
BA U. Southern Maine

Samantha Waielewski
Science
BS UMaine Augusta

Alex Waters
Humanities
BA Dartmouth College
MAT Sacred Heart U

John Wensman
Humanities
BA Univ. of Minnesota
MAT Brown University

Caro Woodard
Humanities
University of Georgia

01 STEM
BA
for Technology and Science

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The Real World Starts Now.