

# Maine Charter School Commission



## **ANNUAL MONITORING REPORT 2017-2018**

## September 2018

On June 21<sup>st</sup> an announced on-site visit was made to the Baxter Academy for Technology and Science. The Maine Charter School Commission (MCSC) Review Team of 3 members was accompanied by the MCSC Executive Director, and MCSC Director of Program Management. The visiting team held interviews with school leadership, and the school's Governing Board. They also reviewed data provided by the school. Information gathered from documents, interviews and on-site observation was used to determine the extent to which the school has met its contracted performance targets.

Commission Member, Review Team Chair	Jana Lapoint
Commission	John Bird
Commission	Jim Rier
MCSC Executive Director	Bob Kautz
MCSC Director of Program Management	Gina Post

School's Mission	<i>To be a rigorous, college preparatory high school promoting student ownership of learning through curriculum focused specifically on science, technology, engineering, and math.</i>
School's Vision	<i>To use a technology-rich, project-based learning approach to education at the secondary level.</i>

***The Maine State Charter School Commission will provide thoughtful stewardship in authorizing and monitoring public charter schools consistent with State statutes to create unique, high-quality learning options for Maine students.***

## 2018-2019 School Information

<b>School Name</b>	Baxter Academy for Technology and Science
<b>Address</b>	185 Lancaster Street, Portland, ME 04101

### Governing Board

<b>Board Chair</b>	Dr. Allison Crean Davis
<b>Vice Chair</b>	Patti Oldmixon
<b>Board Secretary</b>	Christian Sparling
<b>Board Treasurer</b>	Peter Montano
<b>Board Member</b>	Ruth Dean
<b>Board Member</b>	Peter Morrison
<b>Board Member</b>	Thorn C. Dickinson

<b>Executive Director</b>	Kelli Pryor
<b>Principal of Faculty and Instruction</b>	Vacant
<b>Principal of Students and Curriculum</b>	Angela Taylor
<b>Special Education Director</b>	Tammy Holmes

<b>Year Opened</b>	2013
<b>Years in Operation</b>	5
<b>Number of Sending Districts</b>	38
<b>Grades Served</b>	9 - 12
<b>Current Enrollment</b>	400*
<b>Students on Waiting List</b>	26*

\*As of October 1, 2017 certified enrollment count.

## Section 1: Overview

Baxter Academy is a rigorous, college-preparatory high school promoting student ownership of learning through curriculum focused specifically on science, technology, engineering and math (STEM). Baxter Academy students study complex, real-world problems, using and building technological tools in a collaborative environment with scientists, engineers and other professionals.

Baxter Academy sets high expectations for all students, develops social responsibility, promotes innovation and creativity, and produces graduates with a 21<sup>st</sup> century global perspective. Students at Baxter Academy follow a standards-based curriculum for English language arts, mathematics, science, social studies, and the arts. Upon graduation, students will have 21<sup>st</sup> century skills and will be able to continue their education, and be successful, at America's best universities.

Baxter Academy serves students with a strong interest in science, technology, engineering, and mathematics. We offer a challenging college-preparatory curriculum featuring outstanding and innovative teachers. Baxter's teachers help guide students to be passionate, self-directed learners by engaging their intellect and encouraging their imaginations by embracing technology-rich project-based learning.

Baxter Academy also offers a strong humanities and foreign language curriculum to prepare students to be ethical leaders in the 21<sup>st</sup> century global economy.

Baxter was founded in response to a growing urgency among students and parents for greater access to high-quality STEM education. In the summer of 2012, a group of students, parents, educators, and community leaders united around the idea of a STEM-focused charter high school in Portland that would be open by lottery to any high school student in the state of Maine and would feature an innovative, project-based curriculum. A key feature of the school would be Flex Friday, a unique program designed to invest 20 percent of the week in yearlong student-driven projects solving real-world problems. Baxter students would commute daily from a 25-mile catchment area to go to school in downtown Portland where they would be prepared for the best colleges and be plugged directly into the economic engine of the state through internships, mentorships, and industry partnerships.

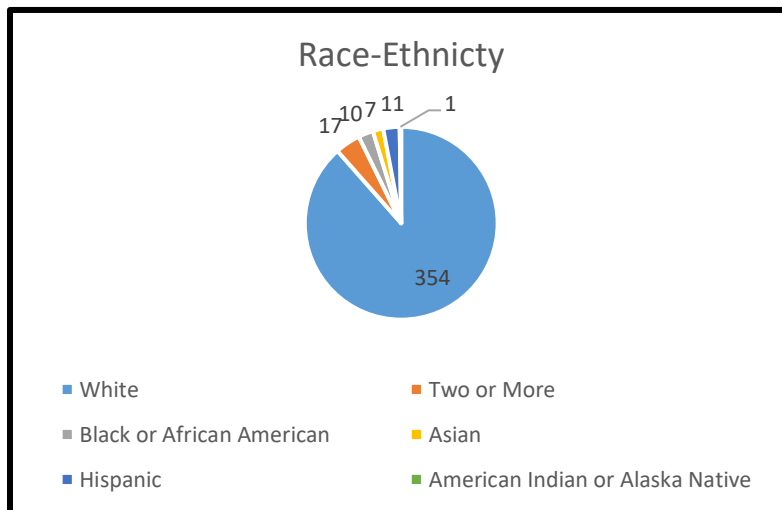
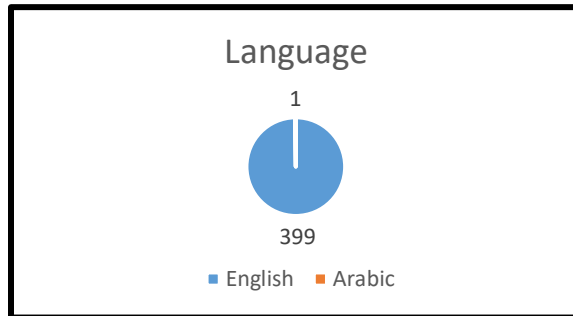
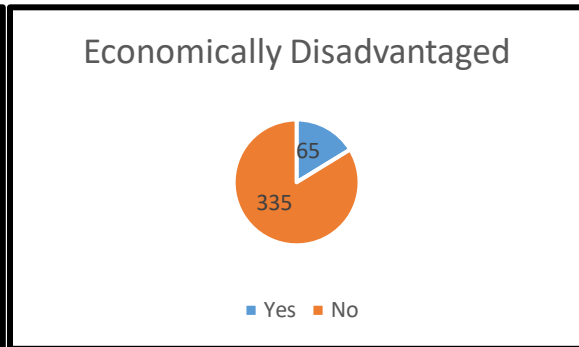
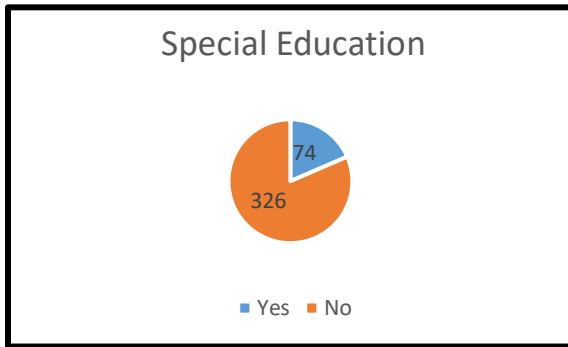
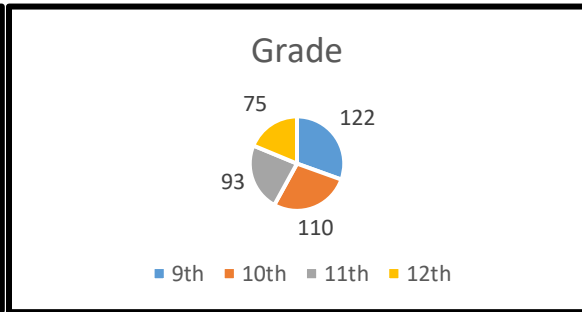
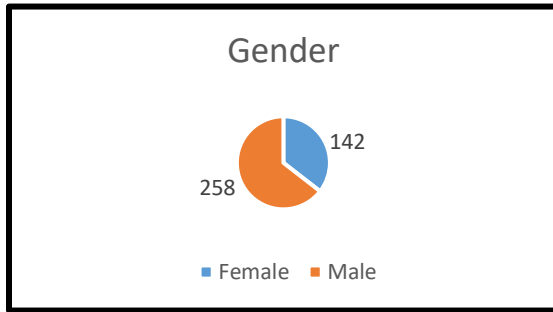
During the rigorous approval process, the community worked together to meet the requirements of Maine's new charter law and the Maine Charter School Commission. Students raised \$8,000 in a 1,000 Pledges in 10 Days campaign. Parents organized information sessions at local libraries.

Baxter Academy has proven already to be a necessary option not only for its students, but for Maine as well. The school continues to seek STEM-industry partnerships and support that will extend its reach and its ability to prepare the next generation of highly skilled innovators who will help Maine meet the challenges of the 21<sup>st</sup> century.

**Section 2: Indicator Summary Table**

<b>Indicator</b>	<b>Meets Contract Agreement</b>	<b>Partially Meets</b>	<b>Does Not Meet</b>
<b>Student Academic Proficiency</b>	<b>X</b>		
<b>Student Academic Growth</b>	<b>X</b>		
<b>Achievement Gaps in Proficiency and Growth Between Major Student Subgroups</b>	<b>X</b>		
<b>Student Attendance</b>	<b>X</b>		
<b>Enrollment from Year to Year</b>	<b>X</b>		
<b>Post-Secondary Readiness</b>	<b>X</b>		
<b>Financial Performance and Sustainability</b>	<b>X</b>		
<b>Governance Board Performance and Stewardship</b>	<b>X</b>		
<b>Adequacy of Facilities Maintenance in Support of Program</b>	<b>X</b>		
<b>Transportation</b>	<b>X</b>		
<b>School Social and Academic Climate</b>	<b>X</b>		
<b>Parent and Community Engagement</b>	<b>X</b>		

Section 3: Demographics



## Section 4: Academics

### Student Academic Proficiency

Measure	Target	Results	Met/Did Not Meet/Partially Met
State Assessment: Evidence Based Reading & Writing (EBRW)	Percent of students at each grade level scoring proficient on State Assessment	80%	Met
State Assessment: Mathematics	Percent of students at each grade level scoring proficient on State Assessment	45%	Met
State Assessment: Science	Percent of students at each grade level scoring proficient on State Assessment	70.67%	Met
School Selected Assessment: NWEA Reading	Proficiency on school selected standardized test	57%	Met
School Selected Assessment: NWEA Math	Proficiency on school selected standardized test	48%	Met

#### **Discussion**

80% of Baxter students scored proficient on the MEA/SAT ELA assessment and 50% scored proficient on the SAT/MEA math assessment.

The NWEA showed 57% of students were proficient in reading and 48% were proficient in math.

### Student Academic Growth

Measure	Target	Results	Met/Did Not Meet/Partially Met
NWEA: Reading	Growth	80%	Met
NWEA: Math	Growth	50%	Met

#### **Discussion**

The NWEA MAP test showed 80% of students showed growth in reading and 50% showed growth in math.

**Achievement Gaps in Proficiency and Growth Between Major Student Subgroups**

Measure	Target	Results	Met/Did Not Meet/Partially Met
Decrease in reported gaps in proficiency between major student subgroups on State Assessment: ELA	Decrease in reported gaps	Baxter’s female subgroup closed the gap between female-male	Met
Decrease in reported gaps in proficiency between major student subgroups on State Assessment: math	Decrease in reported gaps	Baxter’s female subgroup closed the gap between female-male	Met

**Discussion**

On the state assessment in ELA and math the subgroups with sufficient n size for publicly reportable data are listed in the table below. Cells with an asterisk \* do not have publicly reportable data due to a small ‘n’ size and maintaining student privacy.

There is an achievement gap in math between economically disadvantaged students and their non-disadvantaged peers, as well as a gap in ELA between students receiving special education services and those who do not receive special education services.

	ELA	MATH
Baxter	80.23	53.33
State of Maine	45.35	34.53
Female	83.3	53.33
Male	78.5	41.07
Economically Disadvantaged	*	38.46
Non-economically Disadvantaged	*	46.58
Special Education Services	53.33	*
No Special Education Services	85.92	*

**Mission Specific Indicator**

Measure	Target	Results	Met/Did Not Meet/Partially Met
School Developed Measure	90% of graduates will take courses in at least two of three areas and 80% will have taken courses in all three areas (Engineering, Design, and Fabrication).	92%	Met

**Discussion**

92% of the class of 2018 took classes in all three areas: fabrication, design and engineering. Baxter Academy students have taken these classes for the past few school years, during the ramp up phase.



## Section 5: Attendance and Enrollment

### Student Attendance

Measure	Target	Results	Met/Did Not Meet/Partially Met
Average Daily Attendance Rate	An attendance rate at least 1% above the state average, with a simultaneous goal of having rates at or above 94%	94.5%	met

### Discussion

Baxter's Average Daily Attendance of 94.5% was 2% higher than the state average for high school ADA (based on 2016-17 school year data, as 2017-18 is not available), which was 92.6%.

### Enrollment from Year to Year

Measure	Target	Results	Met/Did Not Meet/Partially Met
Student re-enrollment from one year to next	90% of students enrolled on last day of school indicate intent to return the following school year.	91.2%	Met
Continuous enrollment of students for multiple years	90% of students will maintain continuous enrollment for multiple years.	96%	Met

### Discussion

As of June 14, 2018, 91.2% of students have expressed their commitment to re-enroll at Baxter for the 2018-19 school year.

Class of 2020: 93% of students have been at Baxter for 2 years

Class of 2019: 95% of student have been at Baxter for 2+ years

Class of 2018: 100% of students were at Baxter for 2+ years

**Post-Secondary Readiness**

Measure	Target	Results	Met/Did Not Meet/Partially Met
Graduation Rate	Rate	96%	Met
Success in Dual Enrollment Courses	Percent of juniors and seniors attempting dual enrollment courses.	26%	Met

**Discussion**

Baxter’s 4-year graduation rate was 96%.

26% of juniors and seniors attempted dual enrollment classes.

Baxter doubled the number of students taking advantage of college courses from 2016-17 to 2017-18. The school anticipates this number will increase with its transition to semester-long courses, its proximity to USM, and its continued relationship with Thomas College.

In addition to encouraging as much flexibility in scheduling as possible to allow for students to access college courses, Baxter introduced three new channels that aim to improve student access to secondary education. First, Baxter partnered with Thomas College to offer a Dual Enrollment for an Intro to Programming course taught at the Lancaster campus by one of Baxter’s computer science instructors. Second, Baxter piloted the Summit program, which allows students who have completed 75% of their graduation standards to develop their own path to completing the rest of the coursework; many students chose to enroll in local or online courses. Third, the Curriculum committee has spent the year creating a transition plan to move Baxter from trimester to semester programming. This will ease student ability to coordinate their Baxter course load with area college course offerings.

73% of Baxter’s graduating students expressed intentions of attending a post-secondary institution. 17% of graduating students expressed intentions of pursuing full-time employment. The remaining students indicated intentions to start businesses (or continue businesses they had started as students at Baxter), as well as to travel, study abroad, or train for employment.

Baxter class of 2018 students will attend the following post-secondary institutions:

Acadia University	Hampshire College	Mt. Holyoke College	Unity College- Maine
Bard College	Hobart & Wm Smith Colleges	Salem State University	Univ of ME - Farmington
Bates College	Landmark College	So. ME Comm College	Univ of ME - Orono
Bennington College	Lesley University	Smith College	Univ of Southern Maine
Central ME Comm College	Maine College of Art	St. Anselm's College	Wentworth Institute of Technology
Clark University	Maine Maritime Academy	Syracuse University	Worcester Polytechnic Institute
Earlham College	Marlboro College	The New School	Yale University

## Section 6: Finances

### Financial Performance and Sustainability

Measure	Target	Results	Met/Did Not Meet/Partially Met
Financial Performance and Sustainability	Quarterly financial reports and end-of-year audit are available to authorizer.	Quarterly financial statements (July 1, 2017 - March 31, 2018) were reported in Epicenter	Met

#### Discussion

Baxter Academy submitted its quarterly financials to the Commission and its audit to the Maine Department of Education.

Baxter has continued to benefit from financial support from the community. Baxter reports it has maintained a positive cash balance and has not needed to access its line of credit. Baxter's current ratio is 1.75 to 1, which means it has resources available to meet its obligations. The school's internal financial statements are prepared on a GAAP basis, except for depreciation and principal payments. Due to expansion efforts and focus on right-sizing academic salaries, the school budgeted for a small deficit for 2018. Performance is consistent with budget, and cash remains healthy. Parents continue to show their support, through donations of in-kind time, expertise, materials and supplies for student activities, as well as contributing to Baxter's annual appeal.

## Section 7: Governance Board Performance and Stewardship

### Governance Board Performance and Stewardship

Measure	Target	Results	Met/Did Not Meet/Partially Met
Board conducts an annual evaluation of school leadership	Evaluation completed	Evaluation Completed	Met

#### Discussion

Baxter's Board of Directors holds open meetings monthly. All meetings are open to the public and are conducted with regard to statute. Transparency is maintained by posting minutes and agendas online.

Founding board members, including the Chair, provide critical institutional knowledge that allows for continuity and strong working relationships with the school's administration. The Chair is an educational consultant with a national profile. She has consistently consulted with the executive director, serving as a thought partner and providing critical insight. She reviews annually the Executive Director's performance. During the past fiscal year, the founding board treasurer stepped off the board to serve as contract Chief Financial Officer during the high-pressure period when the school was financing and renovating the new building. As one director from the education sector stepped off because of professional commitments, a new director brought an engineering background and experience working in important STEM initiatives in the state. Overall, the Board consists of seven professionals who serve as a vital resource for expertise in school finance, educational best practice, development, assessment, business management, school operations, and the STEM industry in Maine. The board continues to consider highly qualified prospects, especially those who bring development potential.

**Section 8: Facilities & Maintenance, Food Service, and Transportation**

**Adequacy of Facilities Maintenance in Support of Program**

<b>Measure</b>	<b>Target</b>	<b>Results</b>	<b>Met/Did Not Meet/Partially Met</b>
Facility	The facilities shall meet all applicable health, safety and fire code requirements and shall be sufficient in size to safely house anticipated enrollment and meet ADA/ state requirements. Governing board will certify that the facilities meet the above requirements.	Board certified	Met

**Discussion**

The Board of Directors certifies the facilities meet educational and health and safety standards. This year, Baxter Academy moved to a recently renovated space located at 185 Lancaster Street in Portland. The facility was renovated specifically to meet public school compliance standards and support the school’s STEM mission. As of January 2018, all faculty, staff and students are housed in a single location.

**Transportation**

<b>Measure</b>	<b>Target</b>	<b>Results</b>	<b>Met/Did Not Meet/Partially Met</b>
Transportation	Student Ridership on School-chartered Buses	33.5%	Met

**Discussion**

Students travel to Baxter from 59 different towns throughout Maine. Getting to school each day is a varied experience for students, and their families, as students accesses a variety of transportation options. The school provides three chartered buses along routes that provide access for the greatest number of students. The school works with numerous public transportation organizations to facilitate student access, including paying for students’ fares. Students also carpool, drive their own vehicles, walk, ride bicycles and travel by boat. Baxter has a contract with Luce Transportation to run three bus routes.

**Food Service**

<b>Measure</b>	<b>Target</b>	<b>Results</b>	<b>Met/Did Not Meet/Partially Met</b>
Food Services	Lunch Program	Approx. 58% participation	Met

**Discussion**

Baxter Academy has a food service arrangement where local vendors agree to provide select meals for Baxter students for a set price. Lunch services are available to any student at a cost of \$5 per day. This year, six local providers participated in the program where fresh lunches are prepared based upon orders placed a week ahead and delivered daily. Approximately 10,700 lunches were served by June 8th, to approximately 58% percent of the student population. Out of the 10,700 lunches served, Baxter has provided approximately 1,840 lunches to students eligible for free meals at no cost to students and the cost of \$5.00 to the school. Baxter has provided approximately 1,532 lunches to students eligible for reduced price meals at the cost of \$2.50 to students and the cost of \$2.50 to the school. The school has paid approximately \$3,830 in reduced lunch costs and \$9,200 in free lunch costs. Lunch program participation has increased in part due to increased student enrollment and the increased distance students must walk to purchase lunch (lunch delivery is a more convenient option).

Students also bring their own meals and have designated locations to eat during lunch period or may travel within a designated boundary (and with prior written permission from a parent/guardian) to purchase lunch.

**Section 9: School Climate**

**School Social and Academic Climate**

<b>Measure</b>	<b>Target</b>	<b>Results</b>	<b>Met/Did Not Meet/Partially Met</b>
Instances of bullying, harassment or other abusive behavior	Number of behavioral incidents using state and federal reporting requirements.	2 reported incidents	Met
Confidential surveys of parents, staff and students regarding social and academic climate	Results from annual administration of a climate survey representing stable or rising positive perceptions from each stakeholder group concerning school climate and support for learning.	Results stable	met

**Discussion**

For the 2018 Panorama survey Baxter Academy set the goal of increasing the number of responses. Time was given in advisory for students to participate in the surveys, faculty members were given time in faculty meetings, parents were contacted with consistent messaging about the importance of the survey. Baxter’s survey participation increased in all 3 areas from 2016-2017.

Results show that confidence remained high regarding overall social and learning climate. In the coming year, the school report it has prioritized professional development and student work toward strengthening the school’s community and culture.

Panorama Survey results in the school climate scale were stable, with only slight variations from 2017 (see table below). Student survey results place Baxter Academy at approximately the 70<sup>th</sup> percentile nationally when compared to the national data set of similar high schools (schools with a low (0–30%) free and reduced lunch percentage (FRL)). When compared to similar schools teachers and staff were around the 80<sup>th</sup> and 99<sup>th</sup> percentiles, respectively. Baxter Academy families also fell around the 99<sup>th</sup> percentile nationally.

Baxter Academy saw a large increase in survey participation in 2018. Student participation increased 45%, teacher and staff participation increased 48%, and family participation increased 41%.

<b>2018 Panorama Survey School Climate Scale Results</b>	
Students	6% increase from 2017
Teachers	6% increase from 2017
Staff	4% increase from 2017
Families	4% decrease from 2017

## Section 10: Parent and Community Engagement

### Parent and Community Engagement

Measure	Target	Results	Met/Did Not Meet/Partially Met
Educational Partnerships in the Community	Portfolio of corporate, community, and/or academic partners showing growth in the depth of partner engagement and/or breadth of partners	60 partnerships	Met
Parent Communication Systems	Frequency of communications (mail, e-mail, web-postings)	Communication with parents occurs collectively multiple times per month, and on average, weekly	Met
Parent participation in their children's education and operation of school	Number of Parent advisory meetings	Zero	NA
Parent participation in their children's education and operation of school	Percent of families contributing to the annual appeal	15%	Met
Parent participation in their children's education and operation of school	Participation in Student Led Conference	85% participation	Met

#### **Discussion**

Baxter reports extensive efforts in cultivating relationships that benefit the Baxter community. All Baxter administration, faculty, staff, board members, and parents play a role in representing Baxter to the broader community and in fostering relationships.

Baxter Academy indicated in end of year reporting to the Commission that email and text message systems are the primary ways its administration communicates information on a school-wide basis. This year, Baxter introduced scheduled weekly emails of upcoming events, school-wide news, as well as helpful links for the lunch system or extracurricular opportunities. In addition, a text message alert system has been a helpful tool to announce snow days, school-wide schedule changes, etc. The school reported that anecdotal feedback from parents indicated that email communication is sufficient to provide information and is perceived as having more direct communication with the Head of School than they would have otherwise.

The school does not currently have an active parent advisory group. The school has reported that the geographical spread of the school community made managing the group challenging. Parents continue



to find other ways to make meaningful contributions to the school community. The school has prioritized parent engagement around student learning.

15 percent of parents contributed to the school's annual appeal. The school reports that parents also make significant contributions to the school in many other ways such as donations of in-kind time, expertise, materials and supplies for student activities.

During the 2017–18 school year Baxter Academy had 85% participation in Student Led Conferences. Baxter reported that SLCs are a key measure of parent involvement. Students spend time creating a portfolio presentation for their family members and participate in a discussion of learning with their student and the student's advisor.

## Section 11: Administration

For its first five years Baxter Academy was led by a principal who was joined in the 5<sup>th</sup> year by a dean of students. At the end of the school's 5<sup>th</sup> year, the principal left for a new opportunity. The school took this opportunity to examine its administrative structure and determined the school would best benefit from a co-principal model in the next school year. The school's dean of students moved into the principal of students and curriculum position and a new hire became the principal of faculty and instruction.

## Section 12: Evidence of Mission and Vision Implementation

*(See Page 2 for School's Mission and Vision)*

Baxter Academy currently transports 400 ninth through twelfth graders from 59 Maine towns to a new 32,000-square-foot, STEM-outfitted facility in downtown Portland. There, Baxter students lead their own learning as they study complex, real-world problems both in classroom work and through the school's unique Flex Friday program.

Monday through Thursday, students participate in a core curriculum that offers choice among courses emphasizing science, technology, engineering, and math. In the 2017-2018 year, the school is piloted co-taught classes that integrate content across disciplines: A course in Global Information Systems connects geometry, environmental science, technology, and the humanities. Another teaches geometry through computer-aided design. Humanities teachers push into science classes such as genetics to amplify ways for students to learn to communicate well in a STEM setting. Students who are geared toward pursuing engineering as a college major can opt into an engineering pathway designed to develop skills and competencies intended to help first-year engineering majors persevere through obstacles that typically lead half of students to switch majors. Across the school and across a spectrum of interests, students who have met 75 percent of graduation requirements can opt into the Summit capstone experience, where faculty mentors support their work on projects, early college courses, or internships.

- On Fridays, all students participate in Baxter's unique Flex Friday program, which devotes 20 percent of the school week to student-designed and implemented projects that are diverse, meaningful and impactful. Computer science students are exploring virtual reality: One group developed a Virtual Tour of Baxter's facility. In the life sciences, a student aiming for a career as a marine scientist worked in partnership with the Island Institute to develop a kelp-growing curriculum for children—and she implemented it on Peaks Island. Working at the intersection of chemistry, physics, and photography, a group of students has experimented with the Lippmann color photographic process, which is both based on ancient principles and poised on the cutting edge of what's possible. Two students have built wooden boats. A group of ninth graders used CAD to design a series of surfboards. A tenth grader got certified in welding through his Flex Friday project.

To support its real-world learning, Baxter pursues community partnerships. During the 2017-18 school year, Baxter provided STEM support in Portland's district schools: Ten Baxter students designed and led a Tinker Day at East End Community Elementary School for over one hundred students. A group of Baxter girls teamed up with partners from USM to provide a "morning of coding" for female students at King Middle School. Baxter has continued its partnership with LearningWorks, a nonprofit that provides after-school engineering programs for at-risk second through fifth graders in schools in and around Portland; Baxter students have provided digital media support for the after-school program. Baxter continues to deepen its engagement with organizations including the University of Southern Maine, Maine Public, Ocean Passages, and Maine Game. Its partnership with Thomas College utilizes Baxter teachers in support of students in dual enrollment that accelerates progress toward a college degree while significantly cutting costs. Seniors in Baxter's advanced engineering course work with Southworth Engineering to solve design problems. Students are interning at Pika Energy, University of New England chemistry labs, Engine Room makers' space and art gallery in Biddeford, a veterinary clinic in Cumberland, and with UNE's athletic training program. Students are nurturing connections, identifying what they need to get their work done, and drawing upon and appreciating the skills of their peers.

## Section 13: Commendations and Concerns

### Commendations

- Increased survey participation
- Successful transition into new school facility

### Concerns

- Restructuring of administration
- Transition to new leadership