



THE 5 Cs ARE 21ST CENTURY LEARNING GOALS ADOPTED BY THE LINDEN STEAM ACADEMY TO ENSURE THAT LSA STUDENTS PRACTICE AND BEGIN TO MASTER THE CRITICAL THINKING, COMMUNICATION, COLLABORATION, CREATIVITY, AND CITIZENRY SKILLS ESSENTIAL TO SUCCESS AND PRODUCTIVITY IN THE STEAM FIELDS AND OUR GLOBAL COMMUNITY.

Linden  
**STEAM**  
Academy

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**INNOVATION SCHOOL INFORMATION FORM**

*This sheet must be included in all prospectus submissions.*

Proposed Innovation School Name:	<b>Linden S.T.E.A.M. Academy</b>
Full/Partial Conversion or New:	<b>Conversion</b>
Proposed School Address (if known):	<b>29 Wescott Street Malden, MA 02148</b>
Primary Contact Name:	<b>Richard Bransfield</b>
Primary Contact Phone Number(s) :	<b>781-388-0868</b>
Primary Contact Fax Number(s) :	
Primary Contact Email Address:	<b>rbransfield@maldenps.org</b>

If conversion:

Existing School Name:	<b>Linden STEAM Academy</b>
Existing School Address:	<b>Same as above</b>

Proposed Innovation School opening school year:  2017-2022

Proposed duration of innovation plan (up to five years):  3 years  4 years  5 years

<b>School Year</b>	<b>Grade Levels</b>	<b>Total Student Enrollment</b>	<b>Total number of Staff</b>
First Year	K-8	897	115
Second Year	K-8	897	115
Third Year	K-8	897	115
Fourth Year	K-8	897	115
Fifth Year	K-8	897	115
...		897	115
At Full Enrollment	K-8	897	115

**Will this school serve students from multiple districts?**  Yes  No

If yes, list the towns/cities in the proposed regions.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

If yes, list the school districts (including regional school districts) in the proposed region. (Use additional sheets if necessary):

**INNOVATION SCHOOL PROSPECTUS CERTIFICATION STATEMENT**

Proposed Innovation School Name:	<b>Linden STEAM Academy</b>
Proposed City/Town Location:	<b>Malden</b>

I hereby certify that the information submitted in this prospectus is true to the best of my knowledge and belief.

**Signature of Lead Applicant** \_\_\_\_\_ **Date** \_\_\_\_\_

<b>Lead Applicant Information</b>	
Print/Type Name:	<b>Richard Bransfield</b>
Address:	<b>29 Wescott Street Malden, MA 02148</b>
Phone Number:	<b>781-388-0868</b>
Fax Number:	<b>781-397-1512</b>
Email Address:	<b>rbransfield@maldenps.org</b>

## EXECUTIVE SUMMARY

The Linden School opened in September of 2001 and was one of Malden's theme-based and technology-infused schools. The theme, at least at its inception, was the Communications, Humanities and Multi-Media and Magnet/Gifted Education. Over the course of the last ten years, much of the original school "packaging" has changed, mainly due to a loss of grant funding and a shift in district goals, leadership and philosophy. Currently, the Linden STEAM Academy houses 897 students, with 85% in regular education, 2% English language learners, 61.9% recognized as high needs, the district's accelerated learning program, and the largest Special Education population in the district, we also have 72% of our students on free or reduced lunch. We have used our innovation status to create integrated and supportive structures that have yielded consistently positive growth scores for all of our students. The **A**cademically **E**nriched and **A**dvanced **P**rogram at the Linden School includes one classroom at each grade 1-8. Programming and curriculum are developed to fit the academic talents of the students. A criterion for the AEAP Program was established by the Malden Public Schools, which includes rubrics developed by the teachers of the gifted program as well as literacy testing in DIBELS and GRADE. To date, only 5 students in the last 5 years have been accepted to the AEAP program from **other** Malden schools based on our criterion. To date, the AEAP program houses students that have been Linden STEAM Academy students with their academic foundation built by the strong academic expectations we have as a school.

Currently, the Linden School has approximately 115 staff members including specialists and paraprofessionals. Of the 67 teachers, 100% are highly qualified. All paraprofessionals are highly qualified. This was determined by their participation in an extended workshop provided by the Massachusetts Teachers

Association or their possession of an associate's degree. Paraprofessionals who work in the kindergarten classrooms are in the process of obtaining professional development to qualify them for accreditation by National Association of Young children (NAEYC).

The Linden School has provided a niche need in the district when it comes to high performing students and families interested in rigorous learning opportunities for all students. We work to focus not only on high expectations for already-successful students in our AEAP program, but also push all students in all classes to excel. Furthermore, we provide a safe learning environment for two distinct populations of students with moderate to severe special needs. The ability to service these multiple groups of students at a high level is a testament to the professionalism of the staff and their abilities as teachers. To date there are 37 students in our Pathways program; many of these students have been out of district or have had multiple hospitalizations. Due to the philosophy of the program and the diligence of the staff and leadership all of these students are mainstreamed for exploratory subjects and 18 are in the mainstream for academics. The entire 8th grade pathways program is mainstreamed and none of the current 8th grade will be recommended for pathways at the high school! Our mission is well defined and focused on being able to meet the individual needs of all of our students in a rigorous and systematic manner. As an *Innovation School*, continued importance will be placed on the individual learning styles of each student based on individual needs. Differentiated instruction will continue to be the mission in all classrooms with students working on foundational and 21st century skills in small groups. We will use various formative assessments in an effort to maintain the integrity of a true advanced placement program yet meet the needs of all students by giving them opportunities to excel as individuals. We look to enhance and encourage our students to learn social responsibility by teaching RESPECT (respect, empathy, support, perseverance, enthusiasm, communication and teamwork) and mindfulness, an effort to teach students the skills needed to regulate themselves, in all classes. Over the past five years that

the Linden STEAM Academy has had innovation status, it has proven, through any and all measures, that it is possible to for learners of diverse social, cultural, religious, economic, and academic backgrounds to thrive as a learning community.

To assure growth for all we have created a data room that has been a state wide exemplar. Jon Saphier, who has spent time across the country providing professional development for teachers around high academic instruction and expectations, spent this year filming our data meetings, use of the data room and its effectiveness in an effort to share with others. Our data room shows grade level, as well as individual growth, that is celebrated with teachers, interventionists and students at every level. It allows us real time data to drive instruction, increase professional collaboration and share best practices for continual learning for both staff and students.

## **PUBLIC STATEMENT**

The Linden School is an urban K-8 school that currently enrolls 897 students. We look, through innovation, to offer students the opportunity to excel holistically by:

- Offering Advanced Placement opportunity for all our students in an atmosphere of project based learning and inquiry based instruction.
- Introduce a STEAM (**S**cience, **T**echnology, **E**ngineering, **A**rts, **M**athematics) Theme to the school giving the students in Malden the opportunity to attend a school that creates experiences that excite and interest students of all backgrounds in subject areas that are pivotal to the futures of not only their personal and professional lives, but also our country's economy.
- Continue to partner with Tufts University for professional development and curriculum planning, keeping in focus with our STEAM theme.
- Use project based inquiry as a way to engage, assess, and accelerate the

learning performance of all of our students, especially our ELL and SPED students.

- Partner with the AlphaBest as a way to offer a more diverse enrichment program for our students before and after school as well as summers. Programs will include Science, Technology, Engineering, Arts and Mathematics.
- Continue to use Mindfulness as a tool to support students' ability to self-regulate and problem solve as members of their learning and personal communities.
- Continue to work in partnership with BSRI (Bay State Reading Institute) in an effort to increase the literacy skills of our students. Use coordinated professional development to first identify areas of strengths and struggles for our students and our staff and then to coach faculty and staff on those practices that target the identified needs.
- Use project-based curriculum units and celebrations such as science fairs, dramatic performances, Model UN competitions, writing competitions, field trips, and an end-of-the-year exhibition night to increase community involvement and showcase student learning.
- Increase opportunities to participate in a variety of performing arts, through the addition of 4-8 choral groups, a drum line, and a middle-school drama club.
- Continue to be a school uniform school that has aided in our business, collegial and safe learning environment .
- Provide Engineering class for all k-8 students using Project Lead the Way.

## **MISSION STATEMENT**

The Linden School mission is to provide a rigorous, well-rounded educational program that meets the individual needs of our unique population. We focus on science, technology, engineering, arts, and math to accelerate learning in the



student's' wide range of strengths and interests. An ever-increasing percentage of our students - one which is well above district averages - will successfully meet and exceed the Common Core Standards' grade-level expectations through instruction that is tailored to meet their unique needs while remaining steeped in important foundational literacy, numeracy, and interpersonal skills.

## **VISION STATEMENT**

The Linden School is committed to providing our staff with the tools to meet the learning styles of our students. Using STEAM as a theme, we will continue to incorporate project based learning and inquiry based instruction, along with state of the art technological advances so our students will leave as productive citizens and proficient learners ready to address 21<sup>st</sup> century challenges.

## **STATEMENT OF NEED**

The students in kindergarten will be graduating from Linden in the year 2024. As educators it is our responsibility to prepare them to be able to thrive in the 21<sup>st</sup> century as students and later compete in the global marketplace. We live in a society where technology changes at a rapid pace, so we must help our students keep up. Today's students leave school each day and turn on their cell phones (which are now portable computers), or their iPad, laptops and virtual gaming sites. They Google, wiki, spell check, search and surf the web; questions that run through their minds can be instantly explored using technology. The way students are taught in school is not keeping up with their new world. School can be a place where technology, inquiry based instruction and project based learning are used to motivate our students to increase their level of interest and commitment for learning and hopefully generate new interest in STEM (STEAM) fields.

Eric Lander, founder of the BROAD Institute, prepared the Executive Report for President Obama titled "Prepare and Inspire: K-12 Education in Science, Technology, Engineering and Math" (STEM). In the report President Obama was

informed of the country's need for a "world leading STEM workforce." He specifically discussed the lack of proficiency as well as the lack of interest in STEM education among many students. This lack of interest is reflected in our MCAS scores here in Malden. Since our becoming an innovation school we have been able to "spark" and interest in the fields of STEAM learning. Our scores have been reflective of that interest especially in our subgroups where we saw the disparity in our initial plan. This evidence clearly shows the need for the Malden Public School district to offer an alternative. It is clear that throughout our country, we are falling behind in the fields of technology, engineering and mathematics. Dr. Lander clearly stated this in his report to President Obama, and we have evidence to prove his concern, a problem that continues to be addressed by Malden's support of a region-leading public STEAM Academy.

As teachers, we engage ourselves in inquiry throughout our academic careers when we explore questions and try to make sense out of what is going on in our fields. A common question asked by teachers is: "How can I increase my students' interest and get them excited about the subject they are studying?" One way to do this is to give their students inquiry-based assignments and activities that are relevant to their lives and future careers, giving them the opportunity to engage in course concepts and tasks.

Project Based Learning is an instructional approach built upon authentic learning activities that not only engage and motivate students but also fit "hand in glove" with our goals at the Linden Academy. These activities are designed to answer a question or solve a problem and generally reflect the types of learning and work people do in the everyday world outside the classroom.

Project Based Learning is synonymous with learning in depth. A well-designed project provokes students to begin with an open-ended question and encounter (and struggle with) the central concepts and principles of a discipline as they struggle to craft a solution.

Project Based Learning teaches students 21st century skills as well as content.

These skills include communication and presentation skills, organization and time management skills, research and inquiry skills, self-assessment and reflection skills, and group participation and leadership skills.

Project Based Learning is generally done by groups of students working together toward a common goal. Performance is assessed on an individual basis, and takes into account the quality of the product produced, the depth of content understanding demonstrated, and the contributions made to the ongoing process of project realization.

Additionally, Project Based Learning allows students to reflect upon their own ideas and opinions, exercise voice and choice, and make decisions that affect project outcomes and the learning process in general. It is proven that working collaboratively and applying inquiry based instruction will close the gap with some of our struggling learners.

Finally, Project Based Learning leans on small-group instruction, which is one of our pedagogical goals at Linden. Instead of trying to teach the same lessons to entire classrooms of students at a time, teachers have been supported by BSRI in learning how to have students in small groups for instruction and production, a practice that allows them to differentiate for students' needs and assist students in real time as they're working and struggling.

*To aid in our mission of incorporating project based learning we set a goal to focus on small group center based instruction. The key 21st century skills our students should be obtaining are collaboration, creativity, critical thinking and problem solving. We have purchased new furniture for all middle school classrooms that include a teaching table and student tables to begin establishing a 21st century culture. Students at the Linden STEAM Academy in grades K-8 will now take 21st century skills to the next level by learning through collaboration and true differentiated instruction.*

## **Partnerships**

In addition to our partnership with current Linden STEAM Academy community members, additional partnerships linked to science, technology, art, engineering, literacy, and math will continue to be critical components in the Linden STEAM Academy's curriculum and instruction plan. Over the last five years, we have established a strong partnership with Tufts University, which includes support for Novel Engineering and STOMP science; Project Lead the Way, for which we are a very early adaptor at the K-4 level; Science for Scientists, who come into our fifth-grade classrooms for enrichment lessons, STARBASE STEM program that is offered through the Department of Defense; and the Bay State Reading Institute. This past year we have also done extensive work with Jon Saphier and Research for Better Teaching around understanding what "good teaching" looks like and how to better use our data room, which has been a statewide exemplar. We have recently received the FUSE Grant which is a STEAM Education program designed to engage all learners in authentic exploration of science, technology, engineering, arts/design, and mathematics through carefully sequenced challenges. The program is student-centered and interest driven and supports 21st century skills such as adaptive problem solving, creativity, and collaboration.

These partnerships will continue with hopes of expanding our goal of true differentiated instruction done within small groups. These organizations will aid us in providing meaningful professional development as well as state of the art learning facility opportunities for our students. These partnerships will also aid in enhancing our AEAP program as we move to become a Pre-Advanced Placement prototype in our middle school. This exposure to pre-advanced placement coursework will give Linden School students an academic edge when they move to high school. The Linden will also maintain its current partnership with BSRI (Bay State Reading Institute) to provide literacy professional development to our teachers so that we can improve the reading skills of our students, especially those who are performing below proficiency. The BSRI model is characterized by:

- Scientifically researched core curriculum and intervention materials

- Regular assessments of all students, and frequent assessments of struggling students
- Regular data meetings to analyze data and plan responsive instruction
- Strong instructional leadership
- Common planning time
- Differentiated, small-group instruction
- Tiered literacy instruction
- Skilled school-based literacy coach
- Embedded professional development and individualized coaching

The Malden Public School District also has had working relationships with Laying the Foundation (LTF), a comprehensive training program for teachers, school districts such as the 5DP consortium, STEM organizations, and other Malden schools. Laying the Foundation provided Pre-AP and AP teacher training, technical support, lessons, and classroom materials that improve student performance and create a college-ready culture. We also will continue to work with TERC, an organization that has introduced millions of students throughout the United States to the exciting and rewarding worlds of math and science learning. Led by a group of experienced, forward-thinking math and science professionals, TERC is an independent, research-based organization dedicated to engaging and inspiring all students through stimulating curricula and programs designed to develop the knowledge and skills they need to ask questions, solve problems, and expand their opportunities. Our partnerships, current and proposed, will give the Linden School a great opportunity to create an educational model for 21<sup>st</sup> century learning that will be competitive with other high performing schools across the state.

### **Curriculum, Instruction and Assessment**

The Linden School will continue to follow the curriculum as it aligns with the Common Core English Language Arts and Math Standards. However, in order to implement the Science, Technology, Engineering, Arts, and Mathematics theme, the school will have to supplement the existing curriculum. The staff at the

Linden School and central office personnel will collaborate to make necessary revisions to the curriculum, accomplishing it with staged implementation goals. The revision of the curriculum, in addition to the logistics of implementing the new curriculum, will be further explored by the Innovation Team and will be included in the final plan. For this work, we are fortunate to have a teacher who does training and implementation work for DESE on Massachusetts's new science frameworks. An integration of arts instruction across all content areas will also be an important addition to the curriculum, instruction, and assessment.

In our efforts to close the achievement gap between our high and lower performing students, Project Based Learning will be an integral instructional strategy we will use across all grade levels. To further challenge our middle school students and expose them to a rigorous curriculum and instruction that will prepare them for advanced classes in high school, we will offer Pre-Advanced Placement courses.

Our current assessments consist of DIBELS and GRADE which we use to better understand students' individual reading fluency and comprehension. We also will continue to look at benchmark testing in Math and ELA along with mid-year exams across the curriculum in grades 6-8. We will use this assessment data to inform us on the professional development needs of our staff. Currently we are crafting grade-level writing rubrics so that our instruction is vertically aligned and grade-level teams can be supporting the same lessons and performance expectations. We have also instituted "Writing with Colors" in all grades to aid in our mission of enhancing our writing program. We will look to team vertically across grade levels to ensure consistent pedagogy of the writing process is followed and adhered to from kindergarten to grade 8.

## **Schedule and Calendar**

The Linden STEAM Academy has creatively lengthened the school day with the

support of the staff. Currently the schedule permits *all* students to start school at 8:00a.m. and end at 2:30p.m. This time has afforded Linden STEAM Academy students an extra thirty minutes of instruction as compared to other Malden schools without extended-day grants. The Academy changed its school day by looking creatively at the current collective bargaining agreement and using contractual “after school” time as scheduled class time. This added time has also afforded all grade-level teams common planning time. The Academy has also voted to use professional development days differently than the rest of the district, front loading to the week before school starts. This has enabled staff and administration to set the agenda and mission for the year, which has proven to be more productive for setting the agenda for the school year. The vote by teachers to use professional development at the start of the school year will continue to be voted on a year to year basis.

## **Staffing**

The Linden School is requesting staffing autonomy to accommodate the necessary curriculum and instruction changes that are inherent in implementing the S.T.E.A.M. model. The school will accommodate approximately 897 students with four classes per grade level, from Kindergarten to grade 8. Included in this configuration will be thirteen SPED classrooms: five P.A.C.E. (Practical Academic Community Education) and five Individual Management classrooms that house students with moderate to severe special needs and behavioral issues. The Linden will also have a Math coach, Literacy Coach, and four Literacy assistants who will provide RTI for students. The Linden School will be headed by a principal who will oversee the daily school operations and curriculum implementation. The principal will be assisted by two assistant principals-one overseeing grades K-4 and the second responsible for grades 5-8. Two administrative assistants will assist in the management of the day-to-day operations and a custodial staff will be responsible for maintaining the physical plant.

With staff autonomy we have been able to and will continue with pending budget approval:

- Create a Chief Academic Officer position to aid in teacher development. literacy achievement, professional development for staff, lesson modeling and data disaggregation.
- Create two PLTW/LAUNCH positions to teach STEM themes to students K-8.
- We will look to fund a 6th grade team leader as 6th grade voted to be part of the middle school model in place district wide.
- We will create a 21st century library that will include a makerspace for all grades. If the school committee commits to librarians we will use that position to teach/staff this space.

## **Professional Development**

Professional development has been paramount to the execution of providing a high quality S.T.E.A.M. education for all students. Therefore, autonomy for professional development is requested. Targeted professional development will align with English Language Arts, math common core standards and the S.T.E.A.M. curriculum. Professional development will be scaffolded to support staff in the initial implementation process. We have built a strong relationship with Tufts University and the Bay State Reading Institute that will continue.

In addition, we have worked with Jon Saphier and his organization to aid us in further professional development. This past year we had the district's first Ed Camp that provided teachers from across the district to share and problem solve their professional experiences and struggles as well as explore innovations and trends in current educational research. Administration wants to model the power of giving over learning time to learners' questions; EdCamp proved to be a perfect



way to set that example for teachers.

## **Policies and Procedures**

Autonomy from district policies will continue to be requested as the newly developed Linden Governing Board replaced the current school council. The new governing board will be charged with carrying out the school's vision and mission. It will set school policy as agreed to by the Superintendent and the Malden School Committee through the approval of a governing board vote. They will also be charged with holding the staff accountable to any new policies established as a result of the school's designation as an Innovation school. Also, responsibility for certain decisions about the budget, personnel, and the curriculum will originate at the school level rather than the district level, thereby giving the Linden STEAM Academy governing board greater control over the educational process. The board will be a representative body consisting of the principal, teachers, parents, paraprofessionals, and community members that meet monthly to allow for coordination of efforts, awareness of progress and policy decisions affecting the entire school. The entire school staff meets monthly and on an as needed basis. The school committee will continue to set broad policies and establish a clear and unifying vision for the district and the Linden STEAM Academy being mindful of the S.T.E.A.M. school theme that will be in place as a result of the autonomy an Innovation School proposal allows.

## **Budget**

Although some professional development will be provided by our proposed partners, the Linden School will seek budgetary autonomy in the area of Professional Development. This facet of budget autonomy is important for the implementation of our S.T.E.A.M. theme. As an Innovation School, the Linden STEAM Academy must be able to offer professional development which will allow

the staff to design and assess curriculum, instruction, and assessments that will foster the S.T.E.A.M. theme. The Linden will not seek total budget autonomy from the district due to the possibility of losing current positions which may be based upon classified funding.

### **Capacity of Applicant Group**

This proposal is the combination of Linden School staff interest in improving teaching and being able to move our students to the next level. Our concentration will be to develop a program that will integrate science, technology, engineering, art, and math seamlessly across the curriculum while providing rigorous and engaging instruction. Our district level team brings a varied array of experiences and talent which will complement the talents of our building based staff to implement this Innovation School. The group is led by:

- Principal Richard Bransfield has been in the Malden Public School District for over 30 years and has been an administrator for the last ten. In his tenure, Mr. Bransfield has been involved with many district initiatives including the transition of the junior high to middle school model, the development of community schools partnerships, and the city of Malden's initiative to build five new k-8 buildings.
- The new Malden Superintendent, Mr John Oteri will be updated on the innovation plan and his role as the newly appointed superintendent.
- Peter Dolan, Assistant Principal, has years of experience at Essex Agricultural and Technical High School. His expertise on project based curriculum and instruction and interdisciplinary instruction will be an asset to the team in the design of lessons, assessments, and projects.
- David Hochheiser, Assistant Principal, spent 14 in the classroom as an ELA teacher in both Maine and NY. He has been a curriculum director for

middle and high schools' English departments, and an assistant principal at the high school and middle school levels. To the team, he brings experience with master scheduled, interdisciplinary learning, reducing suspension rates, arts integration, data-driven professional development, content literacy instruction, and a personal fascination with technology.

- Susan Terban is the Chief Academic Officer at the Linden School and was an elementary teacher for fifteen years. She steers a partnership with Bay State Reading Institute, bringing scientifically researched-based literacy instruction and professional development to our teachers and students. Susan will play an integral role in professional development in reading and writing through a S.T.E.A.M. lens.
- Shereen Escovitz- Director of STEM, earned a Bachelor of Arts degree from Wellesley College in 2007 where she majored in American Studies with a concentration in Urban Education. She joined Malden Public Schools in August of 2010 as a high school mathematics teacher. In the math department Shereen helped in the transition to common core state standards, developed mathematics placement tests, and led professional development workshops to support English language learners and students with disabilities. At MHS she served as a ninth grade team leader, School Council member, and on the 1:1 Chromebook Committee. In 2011 Shereen earned a Master of Arts degree from Teachers' College at Columbia University in Educational Leadership. Shereen also spent a year out of the classroom as a DESE Innovation Schools Fellow, working to meet the needs of our struggling ELLs. Shereen has been the Director of STEM, K-12 since August, 2016. She has worked to implement new instructional and assessment strategies at all grade levels and is excited to continue this work in the future.
- Maura Johnson has been the SPED Director in Malden for the past 10 years.

Mrs. Johnson's expertise in seeing that a high level curriculum is being provided to meet the needs of the large SPED population will be an asset. Her expertise in SPED curriculum as is applies to the S.T.E.A.M. theme here at the Linden will be important in meeting the needs of this population.

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