

1.1 Executive Summary

14 Del. C. §§ 512(1)-(3). And (5)-(6)

1. Mission and Vision Statements

Mission

LEAN Tech Academy (LTA) is an innovative educational system committed to providing a culture of Leadership, Entrepreneurship, Achievement and Nutrition for students in grades 9 – 12.

LTA'S mission is to cultivate the mind, strengthen the body and nurture the spirit of every child. Through the use of rigorous academic instruction, LTA'S goal is to ensure that students are career and college ready as well as academically prepared to meet the challenges of a global economy. LEAN Tech Academy is committed to providing a safe and caring environment that focuses on the Whole School, Whole Community, and Whole Child.

Vision

LTA students will achieve optimal academic performance and significant personal development through two distinct STEM Pathways referred to as Archways: Biomedical and Global Health Sciences and Processes of Design and Engineering. LTA students will not only meet the challenges of the future, but, through real-world partnerships and practical applications of core concepts, become leaders of the 21st century with competitive academic skills, integrity, respect for others, and a strong self-concept that enhances their personal health and wellness.

2. Educational Need and Target Population

a. Identify the target population, grade levels, and school district(s) that the

LTA will serve students in grades 9 – 12; who are interested in pursuing the sciences, technology, engineering and math --- STEM. These students will come from New Castle County school districts: Brandywine, Christina, Colonial, Red Clay, Appoquinimink and possibly Smyrna School Districts. LTA will increase the number of the New Castle County students who will pursue post-secondary certificates and degrees in Biomedical and Global Health Sciences and Processes of Design and Engineering (STEM fields) and increase the presence of women and minorities in these fields. LTA believes, as www.achieve.org, that all students should graduate from high school ready for college, careers and citizenship.

Potential Impacts:

(1) Improve the high school dropout percentage of males and Black students from 4% to 2% or better (<http://www.delawareonline.com/story/news/education/2014/02/20/dropout-rate-at-30-year-low-in-delaware/5665543/>);

(2) Improve the SAT test scores for an increase in college acceptance and graduation rate, (http://collegecompletion.chronicle.com/state/#state=DE§or=public_four);

(3) Decrease the number of years it takes students to complete college by 20% (http://collegecompletion.chronicle.com/state/#state=DE§or=public_four);

(4) Increase the career readiness and entry level job percentage, (http://www.achieve.org/files/DelawareCCR_FactSheet-Sept2012.pdf);

- (5) Decrease childhood obesity of students throughout New Castle County;
- (6) Improve the physical and emotional health of students throughout New Castle County;
- (7) Decrease the post-secondary university attrition rate for New Castle County Students from low socio-economic backgrounds, thereby fulfilling the legislative intent of DE charter school reform;
- (8) Decrease the first year of college dropout rate by affording 11th and 12th grade students the early college credit option; and
- (9) Improve the state standardized test and college entrance test scores.

a. Explain how the proposed charter school, including the grade levels chosen, will clearly....

The need in New Castle County is to educate high school students in a way that prepares them to be exceptional, well-functioning and productive members of society. Based on recent data from the Bureau of Labor Statistics, STEM programs such as Biomedical and Global Health Sciences, are the fields that will dominate the market place through 2022. **See Appendix 1 Section 1.1** for the US Bureau of Labor Statistics—Fast Growing Occupation 2012 and Project 2022. The Bureau of Labor Statistics reported in August 2013 that the unemployment rate for New Castle County showed 7.2%. The State unemployment rate for October 2013 was 6.8%. Oftentimes, these numbers are higher among young people. LTA will prepare students for success in both a college and workplace setting, helping them make valuable connections to secure their future. For that reason, there continues to be a need for LTA's programs as they prepare students in grades 9 – 12 to think dynamically about the complexities of global challenges.

- STEM is a relatively recent focus of high school curriculums and is not a widely completed Archway for students in most traditional high schools due to scheduling conflicts and lack of marketing strategies. See report of *Delaware CTE Concentrators and Completers by School Year* in the Education Plan.
- LTA's Archways are integrated to increase student achievement.
- LTA's approach embraces The Whole School, Whole Community, Whole Child (WSCC) model; which combines and builds on elements of the traditional Coordinated School Health approach and the whole child framework by the Association of Supervision and School Development (ASCD) and the Centers for Disease Control (CDC).
- LTA's methodology will ensure their overall wellbeing and character development as they progress through an intense project-based curriculum. Through surveys, information sessions, and general feedback, it is clear that many parents are specifically interested in the programs LTA offers, including their student earning early college credit, and participating in a project-based approach that includes opportunities for internships and entrepreneurship.

b. Identify how many families have indicated their intent to enroll in your school.

At the writing of this application, many families have expressed their intent to enroll at LTA. **See ATTACHMENT 13** for parent letters of interest and petition signatures.

3. Community Engagement

a. Describe how the applicant has assessed demand and solicited support for the school.

See Item b. above and STEMtistics in Delaware -- Minorities and Females. (<http://changetheequation.org/stemtistics-facts-figures>) and (<http://changetheequation.org/state-summaries>). See also CDC report on Adolescent and School Health Obese Youth Over Time 2013, 2011, 2009, 2007, 2005, and 2003 in **Appendix 2 Section 1.1, Appendix 3 Section 1.1 and Appendix 4 Section 1.1.**

b. Describe any relationships the applicant currently has or plans to build to engage students...

LTA has already partnered and/or have had conversations with the organizations listed in the Appendices as above.

4. Educational Plan

a. Briefly describe the most important characteristics of the educational program....

LTA's approach to cultivating, strengthening and nurturing entails: (1) involving teachers in rigorous staff development, (2) adopting the national "Character Counts" curriculum, (3) participating in state and local mentoring programs, (4) affording students early college, internships and job shadowing opportunities, (5) developing an advisory system, and (6) modeling Namaste Charter School's extended school day health and wellness program; whereas every day, students engage in 60 minutes of Physical Education and begin the day with "Morning Movement."

LTA will partner with ASCD and CDC 's WSCC approach to academic success. The CDC recently reviewed studies about school-based physical education and physical activity and their effect on academic performance with overall positive results. LTA will use the CDC Coordinated School Health (CSH) program to help meet its wellness goals. Substantial evidence suggests that physical activity can be associated with improved academic achievement, including grades and standardized test scores.

Project Based Learning (PBL) is a key instructional strategy that will be used by LTA. Many of the projects will require integration of STEM; which will insist that staff develop projects that are meaningful and provide an overlap of content areas. LTA will adopt the Multidisciplinary Integrated Curriculum Model from ConnectEd – The California Center for College and Career.

(http://connectedcalifornia.org/downloads/LL_What_is_Multidisciplinary_Integrated_Curriculum_v2.pdf). LTA will impart in its students a "hybrid," "technology-mediated instruction" known as Blended Learning. Preparation will be made for its students' college advancement. LTA sees this as a valuable approach; particularly in the Early College Program. LTA's programs of study are inquiry-based. Students learn to ask questions, take tests, and develop concepts based on their experiences. LTA will adopt the Project Lead The Way (PLTW) Biomedical Science Curriculum – www.PTLW.org.

b. Briefly describe the learning environment and culture.

LTA is founded on Best Practices in Education. LTA will initiate these nine standards adapted from Connecticut's State Department of Education: (1) A Clear and Concise Focus, (2) High Standards and Expectations, (3) Strong Leadership, (4) Supported, Personalized and Relevant Learning, (5) Parent/Community Involvement, (6) Monitoring, Accountability and Assessment, (7) Curriculum

and Instruction, (8) Professional Development, and (9) Time and Structure. **See Appendix 5 Section 1.1 for an explanation of each standard.**

LTA will employ special, passionate and well-trained consultants who can easily adapt to the PBL method of instruction that hails from a tradition of pedagogy which asserts that students learn best by experiencing and solving real-world problems. According to researchers (Barron & Darling-Hammond, 2008; Thomas, 2000), PBL essentially involves the following: students learning knowledge to tackle realistic problems as they would be solved in the real world; increased student control over his or her learning; teachers serving as coaches and facilitators of inquiry and reflection; students (usually, but not always) working in pairs or groups as a dynamic approach to teaching in which students explore real-world problems and challenges. LTA will implement a family culture throughout its school stemming from its advisories called “Centers for Student Success” -- CSS. All students will be assigned to an advisor as they enter 9th grade. They will remain with the same advisor all four years. LTA’s CSS will offer a direct link between a student’s emotional and social experience and academic achievement. As a school, LTA will promote self-esteem, provide peer recognition in an accepting environment, offsetting peer pressure and negative responses. LTA’s students will have a more in-depth relationship with teachers. Parents will be more informed about their child’s academic needs and successes and can better support them. “The LEAN Way” principles are: Responsibility, Excellence, Self-control, Perseverance, Integrity, Respect, Service, Health, Fitness and Nutrition

c. Briefly describe the plan to improve student learning for *all* students...

LTA will assess all students carefully, in order to identify their strengths and weaknesses relative to their rigorous college preparatory, honors and advanced placement classes, to plan a trajectory of mastery for each individual student. LTA’s emphasis on projects engages students and provides flexibility to challenge different students on multiple levels – from those who are behind the grade level standard to those who are above the grade level standard – and allows for accommodations for students with special education challenges. LTA incorporates all students into the regular classroom learning environments to the greatest extent possible. LTA will implement the Individualized Education Plan (IEP) and the Response to Intervention (RTI) process. ELL students will spend the majority of their day in classrooms with English speaking peers. This allows them to be a part of the student body within the school. Their Interaction with peers provides models for language and social development. Often, an ELL teacher or assistant will “push in” to support, modify, or provide accommodations for the student. They may also receive assistance for one period of the day in a self-contained classroom. A self-contained classroom consists of only ELL students grouped together for instruction. Gifted Learners will be enrolled in honors and advanced placement classes. Local university students with similar college majors will be invited to the LTA’s campus to conduct seminars on a regular basis. **See Appendix 6 Section 1.1 Differentiated Instruction Strategies published by Glencoe/McGraw-Hill.**

d. Briefly describe how the school will use assessment to improve student learning.

Formative assessment will provide ongoing feedback that can be used by instructors to improve their teaching and by students to improve their learning. Formative assessment will help our students identify their strengths and weaknesses and target areas that need work. It will help our

teachers recognize where students are struggling and address problems immediately. Our goal in utilizing summative assessment is to evaluate student learning at the end of an instructional unit by comparing it against the Common Core State Standards and benchmarks. LTA will apply summative assessments for the following: midterm exams, final projects, research papers, exhibitions, and the graduation project. The leadership team will review overall school data to track school progress and review individual student data to identify students who may need interventions to ensure their success as part of the Response to Intervention (RTI) process. Teachers will use data to purposefully place students in project groups to capitalize on their strengths, build confidence, and have opportunities for growth.

5. Leadership and Governance

a. Briefly outline the role of the Board in regards to school governance.....

LTA's Governing Board (GB) will have the final say in all policy, fiscal oversight, financial and operational decisions and for setting the overall direction of the school. LTA's GB is one of the most critical elements in the school's success. The GB will: provide oversight functions; promote LTA's mission; lead planning and policymaking; raise funds; and achieve charter requirements.

b. Highlight the strengths of the School Leadership team and the proposed Board.

See Appendix 7 Section 1.1.

c. Explain how the governance and management structures will provide for stable...

LTA's GB will govern the school. As governors of the school, our Board will set the direction for the school in its charter and policy framework and monitor progress towards achieving LTA's expectations. The CEO, followed in rank by School Leader, is delegated responsibility for how the school will achieve the Board's expectations, working within the law and the Board's Policy Framework. LTA's Board, CEO and School Leader will have a clear understanding of their respective roles and responsibilities and work in partnership. The CEO, while a member of the Board, as a non-voting member/executive secretary, she is also the Board's employee. The School Leader is assistant to the chief executive and a LTA's Board employee as well. The CEO plans and collaborates with the School Leader and makes recommendations to the Board, but it is the Board that makes the final governance decisions. The Board can delegate responsibility but cannot delegate accountability.

d. Identify the critical qualifications, credentials and attributes you have identified for ...

Candidates will be selected and screened for their instructional leadership credentials, noted accomplishments in networking with local businesses and international organizations at large, highly knowledgeable in budgeting, data coaching (assessment), instruction and retention of highly qualified teachers. LTA will be recruiting School Leaders who have a verifiable history of fostering a strong school family and community; a School Leader who is knowledgeable about the Common Core State Standards and curriculum development, wellness and its impact on student achievement and STEM education in the 21st century. As part of the pre-employment process, all employees and contractual staff will be required to complete a criminal background check through the Delaware State Police.

6. Business Plan

Provide a brief overview of the business plan that includes facilities, financial

LTA will use the State Budget and Accounting Manual. Title 29, Chapter 69 will be outlined in the LTA Accounting and Policies and Procedures Manual. LTA will follow the 14 Del. C §508 regarding transporting students to school. LTA will use First State Financials system for all financial, accounting, and purchasing transactions. LTA intends to use the Payroll Human Resource Statewide Technology system for managing and reporting compensation, payroll, personnel information, and employee benefits. LTA will comply with the requirements of Title 14, Sec 736 of the Delaware Administrative Code for its Citizen Budget Oversight Committee. See Business Plan in Section 1.9 Item 4 for details.