

## **Delaware STEM Academy Narrative**

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## School Proposal Overview

Provide information for the primary point of contact for your team. This individual will serve as the contact for all communications, interviews, and notices regarding the submitted application. **Note!** Names and contact information may be shared with external groups by the Delaware Department of Education. The information in this section is not included in narrative page limit.

|                                            |                                                                       |                     |                                     |
|--------------------------------------------|-----------------------------------------------------------------------|---------------------|-------------------------------------|
| Name of proposed school                    | <u>Delaware STEM Academy</u>                                          |                     |                                     |
| Primary contact person                     | <u>Ted C. Williams, P.E.</u>                                          |                     |                                     |
| Mailing address                            | <u>8 Cardew Court</u><br><u>Wilmington, DE 19808</u>                  |                     |                                     |
| Phone                                      | Day                                                                   | <u>302-323-9377</u> | Evening <u>                    </u> |
| E-mail address                             | <u><a href="mailto:tedw@landmark-se.com">tedw@landmark-se.com</a></u> | Fax                 | <u>                    </u>         |
| Name of applicant group or entity applying | <u>Board of Directors for Delaware STEM Academy</u>                   |                     |                                     |

**Provide the names and roles in the applicant team and current employer of all persons on the Applicant team.**

| Name                             | Role                              | Current Employment                                                         |
|----------------------------------|-----------------------------------|----------------------------------------------------------------------------|
| Ted C. Williams, P.E.            | School Development;<br>Governance | Landmark Science and Engineering;<br>President                             |
| Carolann Wicks, P.E.             | School Development;<br>Governance | Rummel, Klepper and Kahl, Inc.;<br>Partner                                 |
| June Griffiths-Stepp             | School Development;<br>Governance | Bancroft Construction; Manager of<br>Business Development                  |
| Judy McKinney-Cherry,<br>C.Ec.D. | School Development;<br>Governance | New Growth Strategies; President                                           |
| Charles Driggs, M.B.A.           | School Development;<br>Governance | PEPCO Holdings; Manager, Strategic<br>Initiatives                          |
| Timothy Frey, Esq.               | School Development;<br>Governance | Saul Ewing LLP; Partner                                                    |
| Laura Jennice                    | School Development;<br>Governance | Innovative Schools, Consultant;<br>Delaware Certified Teacher              |
| Stephane McClellann, Ph.D.       | School Development;<br>Governance | University of DE, Director; Offshore<br>Wind Initiative                    |
| Brian McGlinchey                 | School Development;<br>Governance | Laborers-Employers Cooperative<br>Educational Trust; Director of Gov't     |
| Richard Mulski, Ph.D.            | School Development;<br>Governance | Delaware Technical and Community<br>College, Chair; Mechanical Engineering |

## Delaware STEM High School

|                       |                                   |                                                |
|-----------------------|-----------------------------------|------------------------------------------------|
| Anthony Ragone, Ph.D. | School Development;<br>Governance | DuPont Company; Principle Research<br>Director |
| Marian Young          | School Development;<br>Governance | Brightfields Environmental, Inc.;<br>President |
| Innovative Schools    | Management                        | School Support Organization                    |

**Provide the name and planned opening year for the proposed school.**

| Proposed School Name  | Opening Year | Geographic Community †                                                                           |
|-----------------------|--------------|--------------------------------------------------------------------------------------------------|
| Delaware STEM Academy | 2015-2016    | Geographic corridor from the<br>City of Wilmington to Delaware<br>City, and West to Route 13/40. |

*† Identification of geographic community may be as specific as a neighborhood or as general as the city/town identified for the school location.*

**What is the model or focus of the proposed school (e.g., Arts, College Preparatory, Dual-Language, etc.)?**

New Tech Network High School with emphasis on STEM

**Does the school expect to contract or partner with a Charter Management Company or other organization for school management/operation?**

☒ Yes

☐ No

**If yes, provide the name of the Charter Management Company or other partner organization if known.**

Innovative Schools

**Proposed Principal/School Leader Information (if known)**

Name of proposed Principal/School Leader Candidate:

Unknown at this time

## School Enrollment Projection

| Grades                                              | Number of Students                      |                                                               |                                                                                  |                                                                                 |                                                                                     |
|-----------------------------------------------------|-----------------------------------------|---------------------------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                                                     | Year 1<br>2015-16                       | Year 2<br>2016-17                                             | Year 3<br>2017-18                                                                | Year 4<br>2018-19                                                               | Year 5<br>2019-20                                                                   |
| 9                                                   | 175                                     | 150                                                           | 150                                                                              | 150                                                                             | 150                                                                                 |
| 10                                                  | 75                                      | 175                                                           | 150                                                                              | 150                                                                             | 150                                                                                 |
| 11                                                  |                                         | 75                                                            | 175                                                                              | 150                                                                             | 150                                                                                 |
| 12                                                  |                                         |                                                               | 75                                                                               | 175                                                                             | 150                                                                                 |
| <b>Total Students</b>                               | <b>250</b>                              | <b>400</b>                                                    | <b>550</b>                                                                       | <b>625</b>                                                                      | <b>600</b>                                                                          |
| <b>Classes per grade</b>                            | Gr. 9: 7 sections<br>Gr. 10: 3 sections | Gr. 9: 6 sections<br>Gr. 10: 7 sections<br>Gr. 11: 3 sections | Gr. 9: 6 sections<br>Gr. 10: 6sections<br>Gr. 11: 7sections<br>Gr. 12: 3sections | Gr. 9: 6sections<br>Gr. 10: 6sections<br>Gr. 11: 6sections<br>Gr. 12: 7sections | Gr. 9: 6 sections<br>Gr. 10: 6 sections<br>Gr. 11: 6 sections<br>Gr. 12: 6 sections |
| <b>Average number<br/>of students<br/>per class</b> | <b>25</b>                               | <b>25</b>                                                     | <b>25</b>                                                                        | <b>25</b>                                                                       | <b>25</b>                                                                           |

## 1.1 Executive Summary

*14 Del. C. §§ 512 (1), (2), (3), (5) and (6)*

### 1. Mission and Vision Statements

#### **Vision Statement**

The Delaware STEM Academy (DSA) prepares students for the future economy through the teaching of science, technology, engineering and mathematics (STEM) using engineering, environmental science and energy service as a basis for learning. It is an ethically driven educational environment emphasizing intellectual curiosity, individual responsibility and planetary stewardship.

#### **Mission Statement**

The Delaware STEM Academy provides students with the opportunity to learn a STEM-based curriculum using engineering, environmental science and energy concept within a project-based living laboratory. Students are given the opportunity to work in a hands-on learning environment and become self-reliant, logical thinkers who can carry these skills into the real world. Lastly, the Academy has a unique ethics-based social consciousness focusing on environmental sustainability and care for the planet.

### 2. Educational Need and Target Population

#### **a. Identify the target population, grade levels, and school districts(s) that the school will serve...**

DSA will serve 9<sup>th</sup> through 12<sup>th</sup> grade students who reside in Delaware and have an interest in science, technology, engineering and mathematics (STEM). Recruitment will be focused on the corridor from and including the City of Wilmington, the Route 40/Route 13 through New Castle into Delaware City, serving students from the Brandywine, Colonial, Red Clay, and Christina School Districts. DSA's total enrollment by year 5 of school operations will be 600 students, equal to about 5% of students who currently attend high school in these school districts.

#### **Target Population:**

#### **b. Explain how the proposed charter school, including the grade levels chosen, will clearly ....**

According to the President's Advisory Council on Science and Technology, the United States will need to increase the number of students who receive undergraduate STEM degrees by about 34% annually over current rates. DSA was conceived to help address this demand and to develop future workers who can help invent creative solutions to changes in the global environment and evolving energy needs. The demand for professionals in STEM fields is projected to outpace the supply of trained workers and professionals. Additionally, STEM competencies are increasingly required for workers both within and outside specific STEM occupations. A recent report by the President's Council of Advisors on Science and Technology (PCAST) estimates there will be one million fewer STEM graduates over the next decade than U.S. industries will need (PCAST, 2012). In addition, according to the Delaware STEM Council, there are currently 3.8 times more STEM jobs available than unemployed individuals to fill them. Longitudinal studies indicate that students who pursue a STEM degree while in high school is a better predictor of degree completion in college than factors like grade point average (GPA) and SAT scores (Delaware STEM Council Annual Report, 2012). A typical student

graduating from DSA will demonstrate readiness for college-level coursework or work-related skills in the STEM disciplines. Students will graduate with the capability to work in demanding and rigorous specialized environments while possessing the key 21<sup>st</sup> century skills that facilitate problem-solving, collaboration, and critical-thinking.

**c. Identify any admissions preferences and how they will be implemented pursuant...**

Admissions preferences at DSA will be limited to: 1) children with siblings concurrently enrolled at DSA; 2) children of the School's Founders (no more than 5% of the school's total student enrollment); and, 3) children of staff members employed on a permanent basis at DSA for at least 30.0 hours per week during the school year. These preferences will be implemented consistent with 14 Del. C. § 506(b) by ensuring students falling into the preference categories are excluded from any required admission's lotteries.

**3. Community Engagement**

**a. Describe how the Applicant has assessed demand and/or solicited support for the school...**

To create an industry-driven educational experience for students, the Board of the DSA was organized to include leaders in the STEM industries. As part of the development process of this application, the leadership of the DSA reached out to other industry organizations, professional engineering and environmental management firms and the scientific community to gauge interest in the concept of a STEM high school and found overwhelming support for the application and operation of the school. Letters of support letters for DSA from the STEM industry professionals, and other influential members of the community are included as Attachment 12.

DSA has made a strong effort to reach out to parents, educators, local community members and businesses about their proposed school. Data from the survey provides a strong indication that those who learn about DSA would consider enrolling their child in this type of academic program, as evidenced by 92% of respondents stating they would consider enrolling their child in a school that uses the New Tech Network school design and 81% stating that they would consider enrolling their child in a school with a STEM curriculum. STEM and engineering related businesses have also shown strong support for the school. Enrollment trends in local public high schools and private schools indicates that the number of students that DSA hopes to serve is also realistic and would have a minimal impact on enrollment at other high school options (district, charter or vo-tech) - just 3% - and perhaps less than 3% in light of projected population growth. Furthermore, in 2013, the Delaware Charter Schools Network shared data that 4,000 students across the state are on charter school waitlists. DSA could serve as a viable school option for some of the high school aged children on charter school wait lists who are living close enough in proximity. Please see the full Feasibility Study in Appendix A-1

**4. Education Plan**

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

DSA will focus on interdisciplinary, project-based learning centered on science, technology, engineering, and mathematics. The engineering design process will provide the over-arching theme of the school. According to the American Society of Engineering Education (ASEE),

“Engineering design, by its very nature, is a pedagogical strategy that promotes learning across disciplines. A K-12 engineering curricula(sic) introduces young students to relevant and fulfilling science, technology, engineering, and mathematics (STEM) content in an integrated fashion through exploration of the built world around them.” This approach will utilize the New Tech Network project-based learning concept as its platform for learning (Appendix A-2).

There are currently 134 NTN schools in 23 states across the country, and their record of success is strong (Appendix A-3). In this network, DSA will be one of 24 schools which have chosen STEM as their curricular focus. NTN STEM schools value the emphasis on teaching, assessment, and grading of 21<sup>st</sup> century skills. DSA recognizes that the NTN model maximizes the likelihood that students will exit high school with the skills needed to excel in collaborative workplaces such as those found in advanced STEM fields. The NTN school design also allows for the melding of STEM disciplines into courses such as history or English, which traditionally do not include STEM topics. By providing the opportunity to include the arts and humanities into the sciences, students are challenged to explore the possibilities of science and the implications for humanity.

The NTN school model has three key elements of school design: 1) Project-based learning (PBL) is at the heart of the instructional approach and is used across all disciplines and grade levels; 2) A 1:1 student to computer ratio to facilitates an innovative approach to instruction and culture through the use of technology; and, 3) The NTN model promotes a culture that promotes trust, respect, and responsibility. NTN schools demonstrate high levels of student engagement and continued growth along several measures of academic progress. Evidence of the effectiveness of the NTN is included in Appendix A-3.

**b. Briefly describe the learning environment.**

As part of an NTN school, students and teachers will have ownership of their learning experiences and their school environment. Working on projects and in teams, students will be accountable to their peers and will acquire a level of responsibility similar to what they would experience in a professional setting. This culture will extend to the teachers and other adults in the building who will model trust, respect, and responsibility in their interactions with each other. The positive school culture will be built using an advisory system where students build confidence in themselves and in their peers.

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

At DSA, all students will have equitable access to the curriculum. The school will implement a full inclusion model and all students will be part of the regular classroom unless their Individualized Education Plan (IEP) defines a different learning setting. Curriculum and instruction will be grounded in the belief that all students are capable of achieving excellence in learning, and that high-quality instructional planning is critical to accommodate all students. Through instructional differentiation within the classroom, the Response to Intervention (RtI) process, IEP instructional accommodations and curricular accommodations, teachers will be able to address the unique needs of specific students while ensuring the content that students

learn is derived from a set of curriculum documents that articulate the common expectations for all students, including those with special needs.

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

The staff will use a variety of assessment tools to monitor student growth during team meetings, in Professional Learning Communities, and individually as the classroom teacher. 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. With PBL and NTN serving as the academic framework for DSA, students will be assessed continuously during their project work using appropriate formative measures. Teachers will work with students individually and in small, flexible groups based on their assessed needs and growth areas.

Assessments will reflect the natural STEM influence and 21<sup>st</sup> century skills characteristics of NTN schools as students will be assessed on the school-wide, 21<sup>st</sup> century learning outcomes selected by the school leaders and teachers. The combination of academic measures and 21<sup>st</sup> century skills will maximize the likelihood that students will exit high school with the skills needed to excel in collaborative workplaces such as those found in advanced STEM fields.

**5. Leadership and Governance**

**a. Provide an overview of the school's governance and management structure and leadership...**

The Board will be responsible for the oversight and governance of the school, its operations, and its administration. The Board will enact policies which will guide the school to operate in an open and transparent way to ensure that parents, teachers, and stakeholders have a clear understanding of the school's financial health and academic standing, and have regular access to all information and governance functions. The school leader, executive director, teachers, and support staff will be employed by the Board.

When the school opens in 2015, the school will have a dual-leadership structure. The school leader will be the instructional administrator of the school – focusing his or her time on implementing the academic program, leading the teachers and instructional teams, and replicating the NTN model with fidelity. The executive director will manage the operational aspects of the school – focusing his time on managing the day-to-day operations, including business, operational and fundraising activities.

DSA intends to contract with Innovative Schools as its Charter Management Organization (CMO). The Board will directly oversee the CMO as part of its reporting structure. The CMO will assist in the NTN integration, teacher recruitment and curriculum development.

**b. Highlight the strengths of the leadership team and the proposed governing board.**

DSA will be administered by a diverse board which consists of industry-recognized professionals in engineering, environmental science, energy services, finance, construction and management



consulting as well as educators, parents, and community members. The Board will serve as the governing body for DSA; determine school policy; oversee financial and personnel matters; approve curricula; and, reach out to stakeholders, parents, funders and the industry on behalf of the school.

Following the planning year, the leadership team will be comprised of the school leader, executive director, the Board, Innovative Schools (IS) as the CMO, and IS' subcontractor, NTN. In this structure, the school leader and executive director will work closely with the CMO to develop a deep understanding of the NTN model within the Delaware context.

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

The Board intends to contract with Innovative Schools to serve as the Charter Management Organization (CMO) for the first five years of the school's existence. The intent of this contractual relationship is twofold:

1. As CMO, Innovative Schools will build the capacity of the DSA Board and staff to be able to sustain the administrative and academic functions of their charter school independent of a CMO by the time of the school's first charter renewal. Should the Board desire, DSA can contract with Innovative Schools after the first four years for any services offered through Innovative Schools' three service divisions – School Models, School Staffing, and School Solutions – on an as-needed basis.
2. As CMO, Innovative Schools will support full implementation of the NTN academic program, and will serve as the main partner with NTN as its subcontractor.

**6. Business Plan**

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

At the time of this application, the Board is assessing appropriate sites for the location of the school. The Board has identified several geographic areas in New Castle County which represent a diverse socio-economic population and potentially underserved students. This geographic "corridor" is located from the City of Wilmington to Delaware City, as far west as I-95 and surrounding the Route 13/40 corridor. This corridor provides a reasonable distance of travel for students and includes several underserved populations, including the City of Wilmington, some communities along Route 13/40, and Delaware City.

The school will utilize operating funds provided by the Delaware Department of Education (DDOE) and annual local revenues, per formula calculations, to pay the occupancy costs and maintain the facility. To ensure that fiscal viability is maintained, the DSA will regularly analyze enrollment, expenditures, and financial management practices; and, report on this information to the Board on a monthly basis. To ensure financial solvency, particularly during the planning year and first four years of operation, the Board intends to aggressively implement a fundraising plan, and to apply for operating and capital loans (see Appendix F-2) to supplement available resources for school operations.

## 1.2 Founding Group and School Leadership

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*14 Del. C. § 512 (1)*

### **Founding Group Membership [14 Del. C. § 512 (1)]**

#### **1. Identify the key members of the Founding Group for the proposed school. ...**

See Attachment 1-B & C for full resumes and professional biographies for the Founding Board. Summary information for the key members of the Founding Board for the Delaware STEM Academy (DSA) may be found below. These members have had, or will have, a substantial ongoing role in the development, governance, and/or management of the school. A comprehensive list of current board members, their intended roles, and the constituencies they represent may be found in Attachment 1-D.

**J. Brett Taylor, Ed.D., Executive Director:** Dr. Taylor's professional experiences mirror much of the Delaware STEM Academy's philosophical and practical content, cutting across multiple disciplines, such as transportation, education and environmental science. In his current position as Special Assistant for Legislation, Budget and Policy for the Delaware Department of Transportation, he has experienced first-hand the need to develop young people to meet the demands for the engineering, environmental and energy industries. He has also served as the Chief Financial Officer for the Red Clay Consolidated School District, a member of the District Charter Authorization Committee, and played a key role in the start-up of the Conrad Schools of Science. He is an adjunct instructor in the MBA Environmental Stewardship program at Wilmington University. (Community Member; K-12 Education; Charter School Design; Business Management in DE Schools; School Operations; Financial Management; STEM Content))

**Ted Williams, President:** As a founding member of the Board for The Delaware STEM Academy, Mr. Williams will bring an enthusiastic level of dedication, commitment and professionalism to starting Delaware's first STEM charter school based upon an engineering and environmental sciences curriculum. As a civil engineer for over 36 years, he serves as president of a local, successful, civil/site engineering, surveying and environmental services consulting firm. His expertise in the planning and site design of Pre-K to 12 and higher education projects, including numerous athletic facilities, is unparalleled in the state of Delaware. Elected to the College of Fellows of American Council of Engineering Companies (ACEC) in 2011, he completed his services as national Chairman of ACEC in 2013. He serves on many local and national boards and committees, including the Construction Committee for the Delaware Department of Education (DOE), Advisory Panels for the Delaware Council on Transportation and the Delaware Bicycle Council, 3rd Vice President and Chairman of the Transportation Committee of Committee of 100, member of the New Castle County Chamber of Commerce Government Affairs Committee and is past Vice Chairman of the Delaware Interscholastic Athletic Association (DIAA). (Community Member; Fundraising; Organizational Management; Facilities; Real Estate, Project Management; STEM Expertise)

**Carolann Wicks, Vice-President:** With over 30 years of experience in the transportation industry, Ms. Wicks is a certified civil engineer and has been responsible for strategic planning, client management, business development and managing the financial resources for RK&K Engineers. She is a former Secretary for the Delaware Department of Transportation, with deep experience in the design management of key highway transportation projects in Delaware that required leading multi-disciplined teams, working with community groups, and interacting with state and federal elected officials. (Community Member; Fundraising; Organizational Management; Facilities, Real Estate, Project Management, STEM Content)

**June Griffiths-Stepp, Treasurer:** Ms. Griffith-Stepp is a business development professional with over 20 years' experience and success in customer and business acquisition in the construction, architecture and business industries. She has worked with several organizations in both the public and private sector with proven results and success. (Community Member; Diverse Populations; At-Risk Learners; Program Development and Strategic Planning; STEM Expertise)

**Judy McKinney-Cherry, Secretary:** Ms. McKinney-Cherry is one of 1,400 board-certified economic development professionals worldwide with demonstrated expertise in every aspect of economic development. She operates a consulting firm which assists business and government organizations realize their unmet growth and performance goals. She consults with the University of Delaware and serves as a guest panelist. Prior to establishing her consulting business, Ms. McKinney-Cherry spent six years as the Cabinet official under Governor Ruth Ann Minner, responsible for the Delaware Economic Development Office and was the first female to be confirmed in that position by the Delaware Senate. (Community Member; Diverse Populations; At-Risk Learners; Parent/Community Engagement; Investment/Banking; Marketing; Project Management)

**Charlie Driggs, Board Member:** Mr. Driggs is a certified mechanical engineer and the Strategic Initiatives Manager for energy efficiency, load management and renewable energy within Pepco Holdings, Inc (PHI). He is responsible for engaging in regulatory activities and strategic and operational planning that supports the transition to a new electric utility business model for PHI, integrating traditional energy sources with energy efficiency, load management and renewable energy. (Community Member; Parent/Community Engagement; Facilities; Strategic Planning; STEM Content)

**Tim Frey, Board Member:** Mr. Frey is a partner in Saul Ewing's Public Finance Practice. He is bond counsel to the State of Delaware and other governmental agencies, cities, and counties in Delaware. His practice includes a wide range of financing activities involving housing, transportation, general municipal and industrial development projects; and. has worked on transactions at the Port of Wilmington, and negotiations for a P3 project. He has experience with various forms of credit enhancements and derivative products related to public finance bond issues. (Community Member; Charter School Law; Strategic Planning; Project Management)

**Marian Young, Board Member:** Ms. Young, President of BrightFields, Inc, has 33 years of environmental consulting experience, providing municipal and private clients with services to

investigate, manage and remediate contaminated soil and groundwater during the construction of roads, utilities and commercial and residential developments. She is experienced in presenting scientific information in public meetings and forums and in supporting clients and attorneys during complex brownfield real estate transactions. (Community Member; Organizational Management; Facilities; Project Management; STEM Content)

**Brian McGlinchey, Board Member:** Brian is a government relations and public policy professional with experience in education and training, labor relations, community affairs and fundraising. He is the Director of Governmental Relations, Eastern Region, Delaware for the Laborers-Employers Cooperation and Education Trust, advocacy group for the laborers union and associated contractors at the federal, state and local levels of government. He also served as Projects Director for then-U.S. Senator Joseph R. Biden in which he managed federal grants and appropriations, and communications and policy development. Other experience included serving as Associate Director for Diocese of Wilmington, managing the City of Wilmington Employment Corps and a Senior Legislative Assistant for the Delaware Senate. He is a graduate of the University of Notre Dame. (Community Member; Fundraising; Investment/Banking; Strategic Planning; Project Management; STEM Content)

**Stephanie McClellan, Board Member:** Stephanie is the Director of the Special Initiative on Offshore Wind, at the College of Earth, Ocean and Environment, University of Delaware. She has expertise in cutting-edge state/federal offshore wind issues, policy and advocacy, gained from her professional experience in state/local government and private industry. She previously served as the Director of Strategic Initiatives and Outreach for the Atlantic Wind Connection (AWC), a proposed 350-mile subsea transmission system to serve offshore wind farms. Stephanie joined AWC after returning from Denmark, the world's leader in offshore wind production, where she worked with Vestas their strategy to enter the US market. (Organizational Management; Strategic Planning; Communications; Government Affairs; Project Management; STEM Content; Policy and Advocacy)

**Richard Mulski, Board Member:** Mr. Mulski has served as the Department Chair for the Mechanical Engineering Technology, Environmental Engineering Technology and Machinist Training Departments at Delaware Technical Community College (DTCC) – Stanton campus since 2011. He has taught many mechanical engineering technology classes over the past six years at DTCC. Rich has also worked in a vocational high school in Delaware for four years, teaching pre-engineering classes. He also has taught technical courses in the private sector. Mr. Mulski has over 20 years of industry experience working for large aerospace and software engineering companies with a manufacturing, design and engineering focus. Rich is a senior member of the Society of Manufacturing Engineers and is an advocate for the advancement of student skills in the local community. He has also served on the advisory boards of local high schools with a technology focus. Mr. Mulski has received his Bachelor of Science in 1982 and his Master's in Business Administration with honors in 2000. He became an Accredited Application Engineer in Mechanical Design and Aerospace Manufacturing in 1998 and 1999 respectively. (School Leadership and Administration; Business Management in DE Schools; Personnel Management; Parent/Community Engagement; Fundraising/Program Development)

**Andy Ragone, Board Member:** Andy Ragone is a principal research investigator in Dupont's Engineering Technologies group (DUET). His primary responsibility is as lead scientist in development of novel analyzers for agriculture biotechnology including plant physiology biosensors, and food safety instrumentation. He is a coauthor or contributing author on 4 science books and chapters, ten research papers and holds eight patents. He holds a PhD in 1982 from the University of Chicago in Chemical Physics and a bachelor's of science degree from Boston University in 1974. He joined Dupont in 1982 in the Fibers Department doing research in fiber and polymer characterization, laser based measurement technologies and process sensors. (Fundraising; Financial Management; Facilities; Strategic Planning; Project Management; STEM Content)

**Laura Jennice, Board Member,** Laura is a recent graduate of the Delaware Leadership Project and a certified school leader. She holds a Bachelor's Degree in Secondary Education with a major in English and a Master's Degree in Secondary Education from Indiana University. Her past experiences include teaching ELA at the middle school and high school levels for several years in Kentucky and Indiana, while also serving as class advisor, student government advisor, varsity coach and SAT/ACT program coordinator. In Delaware, Laura served as a facilitator at the Delaware New Tech Academy, which is the state's first comprehensive academic program featuring project-based learning and the daily use of computers and technology in the classroom. As a principal and educational advocate, Laura is committed to providing opportunities for students through deeper learning models and innovative learning environments. (School Development; Governance; DE Certified Teacher; New Tech)

In addition to the key members of the Founding Board listed above, DSA will also be supported by a Technical Advisory Group (TAG). This group (below) has also met monthly to provide critical guidance to the executive director and the Founding Board on issues related to both academic programming and school operations. A number of these individuals have worked in Delaware school districts and have extensive experiences in leadership roles.

|                |                                                             |
|----------------|-------------------------------------------------------------|
| Karen Thorpe   | Educational Consultant, former school district CFO          |
| Jill Gessler   | Post-secondary recruiter                                    |
| Ann Murphy     | Membership Coordinator, Brandywine Conservancy              |
| Ted Thomson    | P.E., Pennoni Associates                                    |
| Wilson Tam     | PhD, Chemistry, retired DuPont                              |
| Alan Marteney  | P.E., Century Engineering                                   |
| Kim Ilardi     | Industry Specialist, LEED, A.P. Whiting Turner Construction |
| Mike Angelo    | P.E., McCormick Taylor                                      |
| Jeffrey Flores | P.E., Boeing                                                |

## **2. Explain the Founding Group's collective qualifications for establishing a high-quality charter ...**

The Founding Board's collective qualifications provide an excellent foundation for establishing a high-quality charter high school in Delaware and assuming the stewardship of public funds. In addition to the summary provided in question 1, 'Founding Board Membership' above, the

Board Qualification Matrix along with an analysis of the bulleted categories of information above is included as Attachment 1-A, just prior to the resumes and professional biographies for the Founding Board, which are found in Attachment B & C, respectively. These descriptions provide evidence of the experiences, qualifications, and affiliations that each board member contributes to the development, governance, and operations of DSA. The board members, and members of the TAG, have been selected for their professional experiences and skills related to the development, governance, and management of DSA; along with their passions for and ongoing commitment to the mission and vision of the school, and their abilities to ensure a superior educational opportunity for all students attending the school.

Innovative Schools is a local, non-profit public school support organization. The organization has served as an essential partner to the Founding Group by providing model school tours so that they can see the New Tech Network (NTN) model in action, providing board training, and supporting the development of DSA charter application to ensure the proposed charter school offers a superior 21st century education for students in Delaware.

NTN is a national nonprofit network of schools committed to ensuring that all students have the skills, knowledge and attributes they need to thrive in postsecondary education, career and civic life. Beginning with one school in 1996, NTN has grown to 134 schools in 23 states and Australia, including two other NTN schools in Delaware. More information about the New Tech Network is referenced in the Education Section.

**3. Describe the Founding Group's ties to and knowledge of the proposed school community....**

DSA's Founding Board was established in 2012 and includes a diverse complement of leaders in business, engineering, energy, physical science and finance as well as parents, and educators—most of whom are residents of or are employed in New Castle County. The diversity of the Founding Board exemplifies the principles of the charter school movement—community-founded, talent-powered, and outcomes-driven. In the Board Disclosure Forms, Attachment 12, each board member articulates his or her ties to the school and proposed community along with a summary of his or her experience, qualifications, and affiliations. Additionally, the Board Qualification Matrix, Attachment 1-A, reviews each member's contributions to the collective expertise of the board to govern DSA.

**4. Provide, as Attachment 1 (Founding Group Résumés and Biographies).**

Included as Attachments 1-A, B, and C, respectively, are the Board Qualification Matrix, full resumes and professional biographies for the members of the Founding Board.

**Principal/Founding Group School Leader and Leadership Team [14 Del. C. § 512 (1)]**

**Background [14 Del. C. § 512 (1)]**

**Explain the circumstances and motivations that brought the Founding Group together...**

DSA was formed to develop the next generation of leaders in the engineering, environmental sciences and energy industries. Recognizing that national projections predict a shortage of employees in these fields in the future, the executive director, Brett Taylor, gathered influential

decision-makers in the science, technology, engineering and mathematics (STEM) fields, who have also become concerned that students graduating from Delaware high schools are not learning the full skill set needed to work in scientific and technical environments. This broad skill set includes content knowledge in math, science, engineering, and technology, along with the 21<sup>st</sup> century skills required in professional engineering and scientific contexts. These 21<sup>st</sup> century skills include collaboration, problem-solving, critical-thinking, communication, creativity, and goal setting. The Board is also committed to helping students develop a strong value system which balances the need for a robust economy and sustainability of our planet.

**Principal/Founding Group School Leader and Leadership Team [14 Del. C. § 512 (1)]**

**1. Name the Principal/School Leader candidate, if identified, and explain why this.....**

When the school opens in 2015, the school will have a dual leadership structure. The school leader will be the instructional administrator of the school – focusing his or her time on implementing the academic program, leading the teachers and instructional teams, and replicating the NTN model with fidelity. The executive director will manage the operational aspects of the school – focusing his time on managing the day-to-day operations and the ensuring adherence to the business plan. During the application and planning year, the executive director, Brett Taylor, will volunteer his time to launch a successful school, specifically the school's administrative functions. During the first year of operation, the Board will engage in additional start-up fundraising to support this dual leadership structure.

The school leader, who will oversee the instructional program, has not yet been identified. It is the intention of the Board to recruit and hire a school leader by July 2014 so that he or she can be involved in all aspects of the school's planning year including teacher hiring, curriculum planning, and developing the culture of the school. Recruitment for the school leader will take place through postings, online job forums, as well as outreach through education professional associations, school-leadership graduate programs, and relevant nonprofit associations. The publicized job description will list the required and preferred candidate qualifications, which will include administrator or school leader certification; a master's degree in a relevant field; at least five years of school-based instructional experience; school leadership experience, and experience at the high school level, among other characteristics.

The process for hiring the school leader will involve an initial application, written responses to scenario questions, an initial interview by videoconference, and an in-person interview for select candidates that will involve demonstrations of school leadership capacity. A full selection timeline, list of online and offline recruitment venues, criteria, sample job description and selection process can be found in Attachment Section 2.

**2. If the Principal/School Leader candidate has been identified, provide specific data.....**

The school leader for DSA has not yet been identified. The dual leadership structure, however, will allow for the executive director, Brett Taylor, to support the school through start-up and regular school operations. In his previous roles as Chief Financial Officer for the Red Clay Consolidated School District, a member of the District Charter Authorization Committee and key player in the start-up of the Conrad Schools of Science, Brett brings extensive evidence of

effective leadership and is well-suited to serve the school's target population and perform the responsibilities of a school leader until one is hired early in the planning year.

**3. Who will work on a full-time or nearly full-time basis immediately after approval to lead...**

During the planning year and until the school's first charter renewal, Innovative Schools will serve as the Charter Management Organization (CMO) for DSA, and will provide consistent and immediate support in the development of the school. During the planning year, the leadership team will be comprised of the school's Board of Directors, the executive director, the CMO staff, and, once hired, the school leader.

During the planning year, the leadership team will work together through a series of regular check-in meetings with the Board's four committees: (1) Academic, (2) Personnel, (3) Finance and Facilities, and (4) Marketing and Student Recruitment. Each committee will be co-led by Innovative Schools' staff members with expertise on that particular school start-up topic, and by the school leader and/or the executive director. Board members will be asked to serve on the committees based on their areas of professional expertise. Collectively, the leadership team will ensure the development and start-up operations of the school.

The executive director will remain a volunteer position during the planning year or until sufficient private donor funds are found. Leadership and management services provided by the CMO, along with funding for the school leader's compensation, will be provided through a combination of grant funding and private donations that the Board intends to pursue immediately upon the approval of the charter. During the first three years of operations, until the school reaches full enrollment, the Board will engage in significant fundraising to support the dual leadership structure of the executive director and the school leader.

**4. Describe the responsibilities and qualifications of the school's leadership/management.....**

Following the planning year, the leadership team will be comprised of the Board, the executive director, the school leader, and the CMO and its subcontractor, NTN. In this structure, the school leader will work closely with the CMO to develop a deep understanding of the NTN learning model, and to ensure alignment of the NTN design with the STEM disciplines.

Working closely with the CMO, the executive director will focus on the operational and policy-making aspects of the school. As previously noted, Brett Taylor will serve as the executive director once the school opens, and volunteer his time to launch a successful school. The Board intends to hire a school leader by July 2014.

The CMO will primarily focus on the establishing a strong academic program and culture at the school. During the first year of operations, the CMO will also provide technical assistance and support to the executive director as he established operating policies and procedures for the school. Please see Attachment Section 3 for biographies and resumes of the individuals on Innovative Schools' CMO team, along with a timeline for hiring the school leader, and sample job descriptions for the administrative team. The resumes and biographies for the members of the Board can be found in Attachment Section 1.



### 1.3 Education Plan

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*14 Del. C. §§ 512 (4), (5), (6), (7), (8) and (11)*

#### **Curriculum and Instructional Design [14 Del. C. § 512 (6)]**

**1. Provide a synopsis of the proposed educational program, including key components of the.....**

The Delaware STEM Academy (DSA) will replicate the New Tech Network (NTN) model of school design, focusing on science, technology, engineering, and mathematics (STEM). Twenty-four schools in the NTN have chosen STEM as their curricular focus due to the natural integration of STEM with the NTN model. NTN's emphasis on the teaching, assessment, and grading of 21<sup>st</sup> century skills maximizes the likelihood that students will graduate with the competencies needed in advanced STEM fields. Additionally, the NTN school design allows for the melding of STEM disciplines into courses such as history or English. By providing opportunities to integrate the arts and humanities into the sciences, it provides an appropriate platform for the application of Common Core Standards. Students are challenged to explore the possibilities of science and the implications for humanity. Pending the approval of the school's charter, the DSA Board will begin NTN's readiness process to become the third NTN high school in Delaware, and join a national network of 134 schools in 23 states and Australia. More information about the NTN design elements and core practices may be found in Appendix A-2.

As a national deeper learning model, NTN is based around three key elements of school design:

1. Project-Based Learning (PBL) is at the heart of the instructional approach and is used across all disciplines and grade levels. In PBL – learning is contextual, creative, and shared. Students collaborate on projects that require critical-thinking and communication. Project-based learning also provides opportunities for our private and public sector partners, such as those represented on the Board of Directors and the Technical Advisory Group (TAG) to contribute real-world project sets for students to explore. Research around the core elements and effectiveness of PBL may be found in Appendix B-1.
2. The smart use of technology supports an innovative approach to instruction and culture. There will be a 1:1 student to computer ratio. NTN schools use Echo, an online learning management system, to create a vibrant network which helps students, teachers, and parents connect to each other and to NTN students across the country and allows students to become self-directed learners.
3. Finally, NTN schools maintain a culture that promotes trust, respect, and responsibility. Students and teachers have exceptional ownership of the learning experience and their school environment. Working on projects and in teams, students are accountable to their peers and acquire a level of responsibility similar to what they would experience in a professional work environment.

NTN schools demonstrate high levels of student engagement and continued growth along several measures of academic progress. Evidence of the effectiveness of the NTN is included in Appendix A-3.

In addition to using the NTN as the framework for the school's structure and culture, DSA will be guided by an academic focus on STEM, using engineering to provide the context for other content areas. According to the American Society of Engineering Education (ASEE), "Engineering design, by its very nature, is a pedagogical strategy that promotes learning across disciplines. A K-12 engineering curricula (sic) introduces young students to relevant and fulfilling science, technology, engineering, and mathematics (STEM) content in an integrated fashion through exploration of the built world around them."

United States students typically rank toward the middle of the pack when compared to international students in industrialized nations in math and science. There is a strong belief among science, business, and education leaders that, in order for the United States to become more innovative and competitive, we must prepare more of our children through a STEM education.<sup>1</sup> DSA will prepare all students to excel in an information-based, technologically-advanced society. Through a focus on engineering and design,<sup>2</sup> students will learn that: Engineering is Academic Glue – it binds complex math and science concepts to real-world experiences and leads to learning that sticks with students; Engineering is Creativity – the need for problem-solving and innovation brings out the best ideas from every student; Engineering is Group Work – students learn to communicate and work together while they learn math and science by applying engineering principles; Engineering is Everywhere – students learn that engineers have designed, created, or modified nearly everything they touch, wear, eat, see, and hear in their daily lives; and, Engineering is FUN!

Additionally, engineering education advances learning through: project-based learning (PBL), which has been shown to enhance student understanding of math and science concepts by making them relevant and more enjoyable; engineering education bridges classroom lessons to real-world experiences; and, concrete and applied engineering concepts connect what is learned in school with what goes on in the outside world.

The unique combination of the NTN model and a STEM academic focus positions DSA to be a forward-thinking and innovative school, preparing students to excel in the real world through the integration of rigorous content and 21<sup>st</sup> century learning skills.

## **2. Provide a synopsis of the proposed instructional design that reflects the needs of the school....**

DSA anticipates that it will serve a diverse student population that includes children of different races, socio-economic backgrounds, and learning abilities. As such, the selection of the NTN was intentional as it has a proven track record of propelling students across all demographic groups to academic success. During the 2012-2013 school year, NTN schools demonstrated high levels of student engagement and continued growth along several measures of academic progress. Results on college acceptance rates, graduation rates and behavioral indicators point to strong performance levels among many NTN schools on college and career readiness. For a full report on the effectiveness of the NTN school design, see Appendix A-3.

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<sup>1</sup> From the Federal STEM Strategic Plan, accessed 12/13/13 from [http://www.whitehouse.gov/sites/default/files/microsites/ostp/stem\\_stratplan\\_2013.pdf](http://www.whitehouse.gov/sites/default/files/microsites/ostp/stem_stratplan_2013.pdf)

<sup>2</sup> Bullet points from *Why K-12 Engineering?*, accessed 10/24/13 from [http://www.teachengineering.org/documents/Why\\_K12\\_Engineering.pdf](http://www.teachengineering.org/documents/Why_K12_Engineering.pdf)

DSA staffing will be configured to accommodate 25 students per class except for the integrated courses, which are described below and are structured for two teachers to instruct no more than 55 students. The average student-teacher ratio when including all teaching units is 1:17.

### **Instructional Design**

**Project-Based Learning (PBL):** PBL is at the heart of the instructional approach used by all NTN schools and will provide a living laboratory of contextualized learning experiences for students. PBL provides a context and structure for integrating academic, technical, and career skills into holistic learning opportunities. Students will collaborate on meaningful projects that require critical-thinking, creativity, and effective communication in order to answer challenging questions or solve complex problems. Students will be assessed on their understanding of academic content and on their ability to successfully apply that content using 21<sup>st</sup> century skills. Through this process, PBL will give students the opportunity to develop the real life skills required for success, and will lead to greater student engagement. Research shows this is associated with higher student achievement (see Appendix B-1). Through its partnerships with area engineering firms and STEM industries, projects at DSA will be contextualized with problems presented within the engineering, environmental science and energy fields. Students will develop solutions utilizing well-tested precepts and state-of-the-industry approaches. Mentors will work with students to apply concepts and knowledge. This approach will provide students with cooperative learning environments, encourage independent thinking, and test application of knowledge while meeting state and national standards.

**Technology:** Technology will support the school's innovative approach to instruction and culture. There will be a 1:1 student to computer ratio. Every student will become a self-directed learner. For research on the effectiveness of the 1:1 computing environment, see Appendix B-2. As a NTN school, DSA will also make use of Echo, an online learning management system, which provides a vibrant network to connect students, teachers, and parents to each other and to NTN student projects across the country. The technology required for a NTN model school to support the 1:1 computing environment and a sample cost structure from a NTN school similar to DSA are included in Appendix B-3 & 4, respectively.

The Board recognizes that a 1:1 computing environment presents a unique set of challenges regarding the protection of students in a virtual space, the protection of hardware, and the logistics of tracking student computers. During the planning year, the school leader will work with the executive director and CMO to request guidance from the Delaware Center for Educational Technology to develop policies and procedures to manage the 1:1 technology environment, and to outline the school's acceptable use policies. The policies and procedures for computer use will be included in the Student/Parent Handbook and communicated to parents at information sessions prior to enrollment and at the beginning of each school year.

Additionally, during daily advisory periods, lessons from iSafe will be used at all grade levels to ensure that DSA is in compliance with the Children's Internet Protection Act. The incorporation of iSafe lessons will be more robust in 9<sup>th</sup> and 10<sup>th</sup> grades and gradually decrease over the

remaining years as students demonstrate responsibility in appropriate online behavior, including during interactions with other individuals on social networking sites, blogging, and chat rooms, as well as cyber-bullying awareness and response.

**Integrated Coursework:** Integrated Coursework will demonstrate to students that learning is not isolated and that knowledge is used most effectively and deeply when integrated across disciplines. (Research on the effectiveness of teaching integrated courses is included as Appendix B-5) At each grade level, there will be at least one integrated course, including CaGE (Civics, Geography, and English); Biolit (Biology and Literature), American Studies (American history and literature); and Mathematical Motion (Physics and Math). The integrated courses will be team-planned and team-taught, meeting standards for each content area through cross-curricular projects and the integration of themes and ideas across disciplines. Integrated courses will not have more than 55 students, and will be supported with two teachers. To house the integrated courses, the facility will be organized with classrooms that are large enough to support team-teaching in a technology-rich environment, and equipped with furniture that allows for collaboration and flexibility.

**Business and Community Partnerships:** Partnerships with local businesses and community members will be developed to link the projects that students work on to real challenges faced in their community and in STEM industries. Opportunities will also be explored for internships, and for local businesses or scientific organizations to develop, support and evaluate student projects. This community involvement will help to establish the school as a high quality resource in the community and will provide opportunities for students to engage in the kind of work that they would be expected to perform when they graduate. This is one area where the Technical Advisory Group (TAG), which is comprised of local and regional leaders from the fields of engineering and science, will be a key resource in advising the board and school leader on potential partnerships and serving as ambassadors for the school.

**College and Career Readiness:** Rigorous core courses will meet state standards for college readiness and increase student eligibility for admission to four-year colleges and universities. To ensure that all standards for college readiness are met, all projects will be aligned to Common Core Standards for ELA and math, the Next Generation Science Standards for science, or to the Delaware Prioritized Standards through curriculum mapping, careful project development, and peer review in Professional Learning Communities (PLCs). NTN's emphasis on 21<sup>st</sup> century skills, project management, and communications will prepare students to be successful in the less structured environment of college. DSA will develop key partnerships with local colleges and universities to provide courses to high school students through dual enrollment and with dual credit. For results of college persistence data for NTN alums, as well as NTN alumni self-reports of how the school design prepared them for college (Appendix B-6).

**Professionalism and 21<sup>st</sup> Century Skills:** NTN schools are designed to replicate a modern workplace. In line with this design, teachers will instruct and evaluate students on their level of both 21<sup>st</sup> century skills and professionalism as students work in their project groups and as part of the learning exhibitions. Assessment strategies and tools used across content areas, such as

rubrics and checklists, will reflect the student's application of 21<sup>st</sup> century skills as he or she works in his or her project groups and as part of the learning exhibitions.

**3. Provide an overview of the planned curriculum, including, as Attachment 4, a course scope.....**

Please see the course scope and sequence documents in Attachment Section 4.

**Science**

In grade 9, teachers will use the units of instruction available through the Science Coalition, which are based on research-supported instructional practices. Teachers will attend training to ensure that they are able to implement the curriculum with fidelity. In grade 10, teachers will use the units available through the Science Coalition to guide instruction, but when needed, teachers will be able to supplement the Coalition units with *Science and Global Issues* from the Science Education Program for Public Understanding Program. In grade 11, teachers will use the *Natural Approach to Chemistry* from Lab Aids. These materials emphasize that chemistry is all around us as a complex choreography of atoms and molecules that sustains life. For Physics in grade 12, teachers will use the science kits available from Lab Aids. The rigorous coursework in the sciences will prepare students to take the Biology or Chemistry AP exams. The Memorandum of Agreement to join the Science Coalition is included as Attachment 4-A.

**Social Studies**

DSA will join the Social Studies Coalition and use the published units and lessons that are based on research and best practices in social studies. To supplement the Social Studies Coalition units, when needed, teachers will use *History Alive!* from the Teacher's Curriculum Institute (TCI). *History Alive!* transforms Social Studies class into a multi-faceted learning experience that places the Student at the center of the learning. The letter of intent to join the Social Studies Coalition, a signed copy of the Memorandum of Understanding, and the Social Studies curriculum maps are included as Attachment 4-B.

**Integrated English Language Arts**

DSA will not use a specific textbook for ELA, but will integrate the Common Core State Standards into the integrated projects (speaking, listening, and research) and reading in the content areas (nonfiction reading strategies/content area literacy standards). Students will read, write, speak, and research topics related to projects across the curriculum. To address the literary standards, students will read novels, short stories, literary nonfiction, and poetry related thematically to the social studies units as a humanities approach to social studies/ELA integration. ELA curriculum maps are included as integrated maps with the content area and are included as Attachment 4-C.

**Mathematics**

DSA will use the Interactive Mathematics Program (IMP) for grades 9-12. IMP is a comprehensive program of problem-based mathematics that integrates traditional material, such as algebra, geometry, and trigonometry, with coverage of important topics, such as statistics and probability that have been underemphasized in many traditional programs. The IMP four-year core curriculum meets college entrance requirements and prepares Students to

use problem-solving skills in higher education and in the workforce. In the fourth year of IMP, the math content will be integrated with physics so that students can connect forces, motion, and advanced mathematics.<sup>3</sup> Mathematics curriculum maps are included as Attachment 4-D.

### **Physical Education and Health**

Both of these content areas will use the extensive instructional resources found on the DDOE website. Physical Education curriculum maps are included as Attachment 4-E. Health curriculum maps are included as Attachment 4-F.

### **Spanish**

Teachers will use *¡Avancemos!* in Spanish class when needed to supplement the content from the curriculum map. This program includes instruction in the cultures and language of Spanish-speaking countries. Spanish curriculum maps are included in Attachment 4-G.

### **Visual and Performing Arts**

Visual and performing arts teachers will use various teacher developed resources. Visual and Performing Arts curriculum maps are included as part of Attachment 4-H and I, respectively.

### **Pathways Coursework: STEM**

The STEM Pathways at DSA will include four years of engineering and design coursework (one year beyond state requirements). After taking Explorations of STEM as an introductory course, rising 10<sup>th</sup> grade students will select to enter one of two different STEM pathways, Engineering or Environmental Sciences, to complete the remaining three pathway credits required by DSA.

#### Explorations of STEM (Year 1)

This full year course will introduce 9<sup>th</sup> grade students to STEM fields while providing students with a foundation for future STEM courses. The major focus of the course is to introduce students to engineering standards, research, analysis, global impacts, and technical documentation. The syllabus will include a basic introduction to the engineering fields which employ scientific and mathematic principles to develop, produce, use, and assess products related to renewable energy and the environment. Activities will include hands-on, PBL opportunities that enhance problem-solving skills, teamwork and collaboration. Students will apply their knowledge of research and design to create solutions and communicating their findings to peers and members of the professional community.

#### Engineering STEM Pathway (Years 2-4)

Potential Courses: Biotechnology, Aerospace, Civil Engineering, Electrical and Mechanical Engineering, Civil Engineering, and Energy and Electrical Manufacturing

The content of the coursework in the Engineering STEM Pathway will introduce students to specialized areas of engineering, such as electrical and mechanical engineering, biotechnology, civil engineering, energy and electrical and manufacturing. More advanced studies in this

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<sup>3</sup> As the 4<sup>th</sup> science credit is not currently required by regulation, the curriculum map that integrates IMP 4 and physics will be developed in the summer prior to the 3<sup>rd</sup> year of operations.

pathway will focus on design, technology and support services, which will allow students to discover areas where the application of principles are needed to support projects or job-related tasks. Students will spend time solving problems posed by local engineers and leaders in the engineering industry, completing internships in the field, collaborating with other STEM students from across the New Tech Network, and working with engineering mentors. It is important for students pursuing either college or careers to learn together for both the application of specific engineering knowledge and the professional experience of working together in all levels of an organization. Based on student interest, these advanced engineering courses, in partnership with their physics course, will be diversified and rigorous enough to prepare students to take the AP physics, electricity and magnetism, or mechanics AP exams.

#### Environmental Sciences STEM Pathway (Years 2-4)

Potential Courses: Life Sciences, Material Sciences, Water Resources, Environmental Health, Earth Systems, Energy, and Conservation

The content of the coursework in the Environmental Sciences STEM Pathway is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them.<sup>4</sup> Students will draw from a variety of disciplines, including geology, biology, environmental studies, environmental science, chemistry, and geography to solve problems posed by local and regional scientists and engineers. As juniors and/or seniors students will complete internships in the field, collaborate with other STEM students from across the New Tech Network, and work with engineering mentors from the region. To build the curriculum, teachers will integrate content from leading STEM resources such as Project Learning Tree<sup>5</sup> and the National Institutes for Environmental Health<sup>6</sup> with the AP Environmental Sciences syllabus, preparing students to take the AP Environmental Sciences exam at the end of their senior year.

**4. Provide, as Attachment 5, three units of instruction with corresponding summative assessments...**  
Please see the units of instruction for all required content areas in Attachment Section 5.

**5. Describe how the school will ensure that all students have equitable access to the curriculum.**  
DSA will implement a full inclusion model and all students will be part of the regular classroom in all content areas unless their Individualized Education Plan (IEP) defines a different setting. The curriculum is designed and will be delivered using a performance-based, continuous growth approach that is grounded in the belief that all students are capable of achieving excellence in learning, and that high-quality instructional planning to accommodate all students is integral to improving learning. Through instructional differentiation within the classroom, the Response to Intervention (RtI) process, IEP instructional accommodations and curricular modifications, teachers will be able to address the unique needs of specific students

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<sup>4</sup> From <http://apcentral.collegeboard.com/apc/public/repository/ap-environmental-science-course-description.pdf>

<sup>5</sup> <https://www.plt.org/environmental-education-for-secondary-students>

<sup>6</sup> <http://www.niehs.nih.gov/>

while ensuring the content that students learn is derived from a set of curriculum documents that articulate the common expectations for all students.

**6. Describe the methods and systems that teachers will use to provide differentiated instruction....**

Because of the high degree of student ownership in the instructional framework of the NTN school design, there are multiple opportunities throughout an instructional block for teachers to dedicate time to purposeful, data-driven instruction, flexible grouping, and targeted interventions to both enhance and advance student learning. Teachers will use data from formative assessments to place students in project groups so that they have the opportunity to capitalize on their strengths, build confidence and access opportunities for growth.

Teachers will work with gifted students individually and in small, flexible groups to challenge them. While all students work through the same rigorous projects, 'project challenges' are required for those students who are gifted and talented and who are receiving a weighted grade for the course. 'Project challenges' allow students to extend their learning by exploring an interesting complexity of the problem, conducting additional research, or answering a "What if" question that changes the parameters of the project design. Students participating in cooperative programs and community service programs with partnered companies will also have an opportunity for project challenges with increasing exposure to concepts and projects in these companies. DSA will structure the grading and credit weighting to reflect the intensified work situation experienced by the students.

NTN offers blended learning and distance learning opportunities across their network for gifted students to accelerate their learning. The flexible schedule of a NTN school will allow gifted students to attend college courses and internships in the local community. The DSA, in conjunction with programs such as Wilmington University's *College While in High School Initiative*, will provides opportunities to obtain college credit while in high school.

**7. Provide a synopsis of plans for additional academic support for at-risk students, including...**

DSA will work to ensure that at-risk students are provided a variety of opportunities for academic support. All teachers will participate in professional development relating to the delivery of differentiated course content and to the building of a tool-kit of multiple learning supplements (such as Khan Academy, HomeworkSpot.com, and differentiated readings) to support students. Departments will also develop a rotating after-school tutoring schedule that will provide subject-based tutoring to students in need. The school will also create a student tutoring core. Students who volunteer their time as peer tutors for this program will receive credit toward community service hours. This first level of support will be for students who are struggling with a specific content area, not with the general content or their aptitude.

For students in need of deeper intervention who demonstrate risk for academic failure, the RtI process will be initiated as described in the 'Special Populations' section below. The Instructional Support Team (IST) will actively monitor and address students who are at-risk academically in a tiered support system, including testing for special education services if



necessary. Supports will be outlined in IEP/504 plans and will be implemented in a timely manner either with existing staff or through contracted related services.

At-risk students who do not have identified disabilities and are not performing academically will be asked to sign and complete an academic contract that outlines the plan to address academic deficits and documents the partners who will support the student in addressing deficits. The student, parents/guardians, teachers, and school leader all sign the contract and commit to supporting the student to improve his/her academic performance. This plan will be monitored on a weekly basis by the student's advisor who will report to the IST, the student's parents or guardians, and the school leader on the student's academic progress.

**8. Explain how the graduation requirements will ensure student readiness for college or.....**

See the High School Graduation Requirements section below.

**Student Performance Goals [14 Del. C. § 512 (4) and (6)]**

**1. Describe the student performance standards for the school as a whole.**

In addition to the content standards articulated by Common Core Standards, Next Generation Science Standards, and Delaware Standards, students at DSA will be expected to meet 21<sup>st</sup> century learning standards. They will demonstrate competency in using information and technology as well as the life skills required to be successful. It is the goal of DSA to prepare students for a successful future that requires adaptability and the flexible application of skills across fields and sectors. Specifically, annual benchmarks will be set in the following areas:

**Goal Area #1: Academic Achievement and Adequate Yearly Progress**

At DSA, students will grow academically in reading, math, science, and social studies as measured by their performance on the Delaware Comprehensive Assessment System (DCAS) and the attainment of yearly AYP goals. By the time of renewal, in grades 9 and 10, the percentage of students meeting or exceeding standards in math and reading, as measured by DCAS will exceed state averages. In grade 10, a higher percentage of DSA students will meet or exceed standards on the science DCAS than across the state. In 11<sup>th</sup> grade, the same will be true for Integrated Mathematics III and American History, where higher percentages of students at DSA will pass the End of Course Assessments in these two content areas. All students will demonstrate growth in writing achievement as measured by an analytically scored writing sample, scored using the DDOE writing rubric and benchmarked papers from the Common Core.

**Goal Area #2: The Path to College and Career Readiness**

When students enter DSA they are on a path to graduation. Dropout rates from DSA will be lower than the state average, and as a school average, students will demonstrate college and career readiness by earning SAT scores of 1550, which demonstrate readiness for college. All DSA students will have the option to apply to college, and a large percentage will be qualified to attend rigorous four year colleges. Some students will be accepted into smaller community colleges, or choose career entry after high school. However, DSA's goal is to provide students with a post-secondary education option after graduation. While still at DSA, students will be encouraged to complete college courses during their junior and/or senior year and graduate

with the knowledge that they can be successful at the college level. Upon graduation, all DSA seniors will have spent some time in the community at an internship or cooperative workplace site, connecting what they are learning in school to career-readiness and the real world.

**Goal Area #3: Trust, Respect, and Responsibility**

Following the lead of the New Tech Network and supporting the academic program, the culture of DSA will emphasize leadership, trust, respect, and responsibility. The average daily attendance at DSA will meet or exceed the state's average high school daily attendance. Because of the alignment of culture and academic programming, the need to discipline students for severe infractions will be lower than the state average.

**Goal Area #4: School Satisfaction and Market Accountability**

The DSA community will demonstrate strong involvement and satisfaction from parents, staff, and the community. Parents, guardians, or adult family members will attend school events throughout the year, report their satisfaction with the school on annual surveys, and re-enroll their children each year. Teachers will show high rates of average daily attendance and low levels of teacher turn-over from year to year. In the community, businesses will continue to partner with the school to contribute project ideas, partner on exhibition panels, and host student interns. Desire to attend the school will be shown in re-enrollment numbers and enrollment applications. Demonstrated academic success and the quality of the students who have graduated will be reflected in company and college recruitment.

**2. In addition to the mandatory Delaware Comprehensive Assessment System, identify the...**

In math, teachers will use the interim assessments available through the Interactive Math Program (IMP). This program is aligned to Common Core State Standards and assessment items will capture the instructional and cognitive shifts required by Common Core: deeper understanding, increased focus and coherence, and the application of mathematics to real world learning. The tasks within the IMP assessments are comparable to the performance-based items that have been released by the Smarter Balance Assessment Consortia.

In reading, teachers will use a variety of tools as interim assessments to monitor student growth and to signal improvement. Student's work in literacy will primarily be assessed through project work that is integrated across the content areas. This work will be assessed using teacher-developed rubrics that define which reading standards a particular project is addressing and articulate what performance looks like as students fall well below, approach, meet, or exceed reading standards. As part of the project development, the teacher will plan formative assessment measures to monitor student progress and provide feedback. Teachers will use oral communications rubrics to assess students' comprehension abilities when they talk with other students in a collaborative context as they work on projects. All of the rubrics will be developed in alignment to Common Core and will align with assessment rubrics provided through the Smarter Balanced Assessment Consortium to assess performance-based tasks. The project and oral communications rubrics will be developed for the 9-10 cluster and the 11-12 cluster to reflect the two clusters in the Common Core Standards.

DSA will be a member of the Social Studies Coalition and will use the formative and summative assessments, transfer tasks, and rubrics developed by the Coalition. In the integrated social studies courses (grades 9, 11, and 12), for the units in the curriculum map that are not developed by the Social Studies Coalition, the DSA teachers will use materials, assessments, and rubrics from the NTN Project Library. The project library is a resource of project outlines, instructional guides, assessments and rubrics developed by master teachers across the NTN. Although developed in other states, the projects selected by DSA to augment the Delaware Social Studies Coalition units in each integrated map are aligned to Delaware's Prioritized Social Studies Standards. In the stand-alone Enhanced Economics course, teachers will use the Social Studies Coalition units and interim assessments. For the units defined in the Enhanced Economics curriculum map that are not from the Coalition, teachers will use the instructional materials and interim assessments from *Economics: Concepts and Choices* from Holt McDougal. In developing the interim assessments for non-Social Studies Coalition units, teachers will critically evaluate the project library's or publisher's suggested assessments and revise based on the Delaware Social Studies Standards identified for that unit and the enduring understandings, essential questions, and learning targets identified for that unit.

For science, DSA will be a member of the Science Coalition and will use the formative and summative assessments and rubrics defined in the curriculum materials developed and/or adopted by the Coalition. For the science courses that have not been fully developed by the Science Coalition, teachers will use the instructional materials and interim assessments from the following materials:

- Grade 10: Science/Global Issues – Biology from Science Education for Public Understanding
- Grade 11: The Natural Approach to Chemistry from Lab-Aids
- Grade 12: Physics Instructional Modules from Lab-Aids

Now that Delaware has officially adopted the Next Generation Science Standards, the science teachers from DSA will work with the Science Coalition, as opportunities are available, to re-align instruction and interim assessments to these standards.

In Spanish, teachers will use teacher-created interim assessments that are aligned to the Delaware Prioritized World Language Standards, and the enduring understandings, essential questions, and learning targets reflected in the curriculum maps. Both formative and summative assessments will reflect the various modes of communication, including interpersonal, presentational, and interpretive tasks. The Spanish teacher will use rubrics from the DDOE World Language website to articulate expectations for the assessment, to guide the development of the students' products, and as the final assessment tool.

In the physical education program, the physical education teacher will use the model units available on the DDOE Physical Education webpage which are aligned to Delaware's Physical Education Standards. These model units provide performance assessments and rubrics to assess both the student's performance of the fitness concept and written responses which articulate understanding. For units of instruction for which there are not model units, the teacher will create assessments and rubrics similar to those found in the model units and

ensure they are aligned to the Physical Education Standards. Students will also participate in the Fitness Gram assessment at the beginning and end of the physical education course.

In health, teachers will use the assessments defined by the model health units available on the DDOE website. Additional materials and assessments outside the DDOE model health units will come from Healthteacher.com or will be teacher-created and aligned to the Delaware Health Education Standards and the enduring understandings, essential questions, and learning targets reflected in the curriculum maps.

In the visual and performing arts, teachers will use teacher-created interim assessments and rubrics that are based on Delaware's Visual and Performing Arts Standards. The assessments will be largely performance based and will evaluate students' capacity to demonstrate their understanding of theoretical concepts of the visual or performing arts and their ability to create artworks and musical interpretations and compositions.

**3. If the school plans to adopt or develop additional academic performance goals or assessments.....**  
DSA will not use any additional standards, performance goals, or assessments beyond what has been articulated.

**4. How will the school's policies and standards for promoting students' from one grade to the next.**  
DSA will meet and exceed the credit requirements of the State Board of Education in awarding credits for promotion and graduation, including Algebra II, Integrated Math III, Biology, English II and U.S. History. Students will also complete at least four credits of STEM coursework, community service hours related to the STEM disciplines, field work such as internships, STEM-focused competitions, and/or mentoring elementary or middle school STEM students. All DSA students will complete a Senior Capstone Project and take one college course. For the exit standards and promotion criteria for Students in grades 9-12, see Appendix B-7. Students will not be promoted into the next grade until all of the requirements at each grade level have been met.

The criteria for promotion will be communicated to parents through the Student/Parent Handbook, at Back-to-School Night, and during the Parent Information Night when students register to attend the school. Additionally, in their advisories, students and their advisors will update and monitor the Student Success Plans and promotion criteria and share that information with parents.

**5. Explain the process for ensuring that all students in grades 8-12 have a complete student....**

At DSA, students will be placed into advisories to build school culture and as a way to facilitate college readiness. Unlike traditional homerooms that are convened for administrative purposes, advisories are based on relationships, coaching, and an agenda driven by the needs of the students. The teacher who leads each advisory will be one of the teachers for that student group's current grade level, promoting cohesion between academic programming and the advisory structure. Advisories play a critical role in Student Success Planning (SSP) and stay with the student throughout the student's tenure at the school. Students will create their post-

DSA plan and update their profile on Career Cruising at least twice per year. Although students may update their profile and SSP on Career Cruising anytime, advisors will specifically schedule time for students to update their profiles at the end of each semester. To monitor each student's SSP, advisors will confer with each student about the student's SSP and his or her goals for the year, noting how well the student is progressing through benchmarks to meet those goals. For some students, more frequent conferences will be required due to indicators (such as inconsistent attendance, low scores on DCAS, missed due dates, low formative assessment scores, etc.) which suggest they may struggle to stay on course.

**High School Graduation Requirements** (*High Schools Only*) [14 Del. C. §§ 512 (4), (5), (6) and (7)]

**1. Explain how the school will meet these requirements and monitor them through the use of....**

Students will earn an additional seven credits above the 24 required by the DDOE, including advanced Science, Social Studies, World Language, and Leadership Pathways credits. Additional required credits in science and social studies during grade 12 and an additional year of World Language in grade 11 will be required of all students so that they meet the minimum "Commitment to Delawareans" admission criteria from the University of Delaware, as well as similar course requirements at other four-year colleges and universities. Elective courses will be offered in technology, advanced STEM the arts, and engineering.

The schedule for DSA will include four 90-minutes blocks each day for 182 days, totaling 136.5 hours in each course. Courses will rotate on an A/B block schedule. Sample schedules are included as Attachments 6-B-1 through 6-B-4.

Grades for individual courses will be calculated using assessments of both content and 21<sup>st</sup> century learning. For example, in chemistry, a student's grade might be computed as 70% acquisition of the chemistry standards, 10% collaboration, 10% oral and written communications, 5% creativity, and 5% professional work ethic. The specific percentages will be determined by the school leader and teachers based on their development of the School-wide Learning Outcomes during the summer prior to opening.

DSA will use A+/- grading scale as follows:

| Grading Scale |           |           |           |         |
|---------------|-----------|-----------|-----------|---------|
| A+ 98-100     | B+ 90-92  | C+ 82-84  | D+ 75-76  | F 60-69 |
| A 95-97       | B 87-89   | C 79-81   | D 72-74   |         |
| A - 93-94     | B - 85-86 | C - 77-78 | D - 70-73 |         |

Grade point averages will be computed by assigning the following point equivalency to each letter grade.

| Grade Point Equivalency |          |          |          |        |
|-------------------------|----------|----------|----------|--------|
| A+ 4.33                 | B+ 3.33  | C+ 2.33  | D+ 1.33  | F 0.00 |
| A 4.0                   | B 3.00   | C 2.0    | D 1.00   |        |
| A - 3.67                | B - 2.67 | C - 1.67 | D - 0.67 |        |

College courses that are taken for dual credit and AP/Advanced coursework will be weighted as the grade point equivalent listed in the table plus 1.0. Therefore, an A- in an AP or college course would equal 4.67.

Transcripts for the students from DSA will reflect the course titles listed in the course sequence above and the letter grade that the students earned in the course. Transcripts will also include information about how each letter grade was calculated and Grade Point Average.

**2. If applicable, also explain how the school will meet the requirements for any and all Career....**

DSA will not offer CTE coursework at this time.

**School Calendar and Schedule [14 DE. C. § 512 (6)]**

**1. Provide, in Attachment 6, the school's proposed calendar for the first year of operation....**

The school calendar and instructional schedule is included in Attachment 6-A. The sample daily and weekly schedule of classes is included in Attachment 6-B-1 through 6-B-4. The schedule for DSA will include four 90-minutes blocks each day for 182 days, totaling 136.5 hours in each content area and elective. DSA will use an A/B day alternating block schedule so that all classes have the instructional time required for PBL. Unlike direct instruction and lecture-based methods, PBL requires time for students to collaborate, problem-solve, and construct knowledge. The process of completing the work and developing the project becomes a critical learning opportunity that takes longer than the typical 45-minute period. Additionally, in the A/B schedule, students will take eight classes at a time on alternating days all year long, so there is an unbroken development of skills, unlike when courses are taken on a semester basis. The proposed calendar includes professional development opportunities for teachers to begin planning projects prior to the start of the school year as well as opportunities throughout the year to work with colleagues to plan joint projects. The calendar also notes the new students' 'Gear Up to STEM' summer induction program and the summer school program. Both of these summer programs are contingent on fundraising.

**School Culture [14 Del. C. § 512 (6), (7) and 14 Del. C. §4112D]**

**1. Describe the culture or ethos of the proposed school and how this culture or ethos will promote....**

The culture of NTN schools is built on trust, respect, and responsibility. When the school leadership and teachers attend trainings, they learn strategies and tools to build a positive school culture. As the NTN coach meets with the leaders and teachers in the summer prior to the school opening, he or she will work with them to put structures and routines in place that have been effective across the NTN at building the school culture. Given the unique school design, a positive school culture is essential to the academic program. As part of a NTN school, students and teachers will have ownership of their learning experience and their school environment. Working on projects and in teams, students will be accountable to their peers and will acquire a level of responsibility similar to what they would experience in a professional setting.

Integral to the school culture will be a program of learning around environmental sustainability as a way of creating a harmonizing and values-based approach to ethical, professional, and

personal behavior. Students will have the opportunity to learn about the environment through class and extracurricular projects focused on the environment, such as reforestation projects, recycling, alternative energy, water stewardship and conservation projects. Students can use these opportunities for community service credit, club projects, internships and project content as part of their graduation requirements. Partners will include environmental firms and other related corporations. The DSA will contract with various organizations to develop and adapt the content for these projects. Students will ultimately learn the value of their collective actions in making positive change.

The development of the school culture will extend to the teachers and other adults in the building, who will model trust, respect, and responsibility in their interactions with each other. The positive school culture will be built using an advisory system which creates a “home base” for all students each year where students build confidence in themselves and in their peers.

**2. Describe the school’s bullying prevention and anti-hazing policies....**

DSA will employ a number of strategies to prevent bullying, cyber-bullying and anti-hazing. One key strategy will be the use of Restorative Justice Practices as teaching and learning tools to support the school’s culture of trust, respect, and responsibility. Through these strategies, teachers and students learn appropriate ways to deal with unacceptable conduct, respond to bullying behaviors, and consider alternate approaches to resolving disagreements. Information targeting the school’s culture and Restorative Justice will be provided to staff, students and parents through various orientation venues, such as parent/student orientation sessions, staff training, and the Student/Parent Handbook. Research on the effectiveness of Restorative Justice Practices is included as Appendices B-8 and 9.

A Bullying Prevention Committee will be established as part of a broader team that addresses school safety, school culture, and behavioral and academic expectations that align with the school’s mission and vision. Development of these pieces will become part of planning year activities. DSA will use the model Bullying/Cyber-Bullying/Anti-Hazing Policy that is available on the DDOE website as the foundation for its own policy (see sample policy Appendix B-10).

**3. Explain how the school culture will serve and support students with special needs...**

DSA will promote equity among all students, regardless of the special needs of any individual student. The school culture is based on building trust, respect, and responsibility—three components that are critical to the success of a model that relies on team work and collaboration. As an inclusive school, students will be taught that diversity on a team is a valuable asset, and that all students will be able to participate in the academic and engineering pathway classes. Accommodations will be made for any learning or physical disabilities according to a student’s IEP or 504 Plan. The use of PBL will promote teamwork and the inclusion of all teammates in the development and completion of the project. Skillful group composition challenges students to capitalize on their own strengths and learn from the strengths of others while collaborating on projects. Advisories will engage all students in character education that includes promoting sensitivity and diversity. Through the combination of a strong, research-based academic program from the NTN as well as an intentional focus on

building a school culture focused on valuing differences, the school culture will be one in which all students are able to find a place to shine.

**Supplemental Programming** [14 Del. C. § 512 (6)]

**1. Will the applicant offer summer school? If so, describe the program(s) to be offered....**

DSA will offer a summer school program to those students requiring an extended school year (ESY) or needing additional time in the summer to complete an academic contract. Teachers in each of the core content areas will be hired to work with students for five weeks, Monday through Thursday, from 8:00 am – 11:00 am. The time will be used to provide small-group instruction, individualized tutoring, and independent work time, based on each student's contract or the goals outlined in the ESY section of the IEP.

The school will provide ESY services for all eligible students. ESY services are based on the unique needs of each child as well as the team-developed goals and objectives contained within his or her Individualized Education Plan (IEP). Any students, who will not receive a Free and Appropriate Public Education (FAPE) during the regular school year, as determined by the IEP team, will be eligible for ESY services. The decision, rationale, and description of the setting and goals for the program will be outlined in the IEP under "Considerations of Eligibility for Extended School Year Services (ESY)."

**2. Describe the extra- or co-curricular activities or programming the school will offer....**

DSA will offer extracurricular activities, sports, and clubs based on the STEM program and the interests of the students, and the availability of staff members to sponsor the groups. Sports teams will be funded through the development of a Sports Booster program and sports participation fees. Clubs and activities will be self-supported through activities fees and fundraising. If students are not able to pay the activities fees, donations will be sought from other sources and/or fees will be waived so that all students have access to all programs. Sports teams will be introduced after Year 3 of operation to allow a critical mass of students to be available and as to not detract from the startup of the academic portion of the school. Clubs will be encouraged at the start of the school, particularly those complimenting the academic goals of the Academy and encouraging participation in competitions outside the school (e.g. science bowls, robotics competitions, etc.)

High School competitions such as the First Robotics, Marine Advanced Technology Education (MATE), SeaPerch and Future City are examples of engaging students in mentor-based programs that build science, engineering and technology skills, inspire innovation, and foster self-confidence, communication, and leadership. Students learn to apply math and science concepts to real-world issues, develop writing, public speaking, problem solving, and time management skills, research and propose solutions to engineering challenges, discover different types of engineering and explore career options, learn how their communities work and become better citizens, and develop strong teamwork skills. These activities can be incorporated into the curriculum or as an after school project. Funding for competitions will depend primarily on sponsorships or donations from corporate, private and public partners.



Lastly, students will be encouraged to participate in extra-curricular programs involving environmental and energy sustainability. These activities can be used for both course credit, community service or after-school programming and involve the development of Eco-friendly life sciences and environmental projects. Students may also use these activities as content toward their capstone projects. Programs such as ESCOAtlantic's Green Education Courses will provide primers for sustainability for students and integrate them into green projects, such as bioremediation, greenhouse growing, aquaponics, hydroponics and alternative energy development. This program will be funded through sponsorship funding and sales of goods as part of the production output of the program (food to stores).

**3. Describe the school's programs or strategies to address student mental, emotional, and....**

DSA teachers will be trained by a contracted psychologist and will draw on the expertise of special education staff to recognize signs of appropriate mental, emotional, and social development for the grades they are teaching. Through the advisory system, adults in the building will be well-connected to each student and able to recognize concerning changes in behavior. If issues arise, the school nurse will be notified. Concerns will then be reported to the appropriate state or social service agency.

**4. If applicable, describe any other student-focused activities and programs that are integral...**

Students at DSA will complete 25 hours of community service each school year. Advisors will supervise students in securing appropriate community service opportunities and will document their service with the signature of their supervisor. In addition, students will be asked to complete a leadership activity in the community. This could be leading a team of students to pick up litter, for example, or raising money for a particular cause. These volunteer and leadership opportunities will be coordinated through the advisory period and entered into each Student's Success Plan.

In their junior and senior years, students will work on their Senior Capstone Projects, which are built around the students' interests and career goals. This project will involve significant research into a topic that is meaningful to the student, focused community service and leadership hours, internships in the community, and a presentation at the end of the senior year. During their senior year, time in ELA class will be spent preparing for the senior project. Progress will be monitored during advisory.

**Special Populations and At-Risk Students [14 Del. C. § 512 (4), (5), (6) and (7)]**

**1. Identify the special populations and at-risk groups that the school expects to serve....**

Students may come to DSA for different reasons, but the one characteristic that all students will share will be that they are all looking for an education that is focused on science, technology, engineering, and math. DSA expects to serve a diverse population of students across demographics and socio-economic levels and will provide the services required by DDOE regulations. Based on statistics from the school districts serving students in Wilmington (where the school may be located), DSA will serve a small population of English Language Learners, migrant, refugee, and gifted students. Given that poverty is an indicator of at-risk populations, DSA anticipates that free and reduced lunch (FRL) and at-risk learners will be approximately

50% of the student population. Although local special education averages are around 10.6%, DSA is planning instruction based on the state average of 12.5% special education students. DSA welcomes all students, and will educate each student to be an exceptional learner through rigorous content and 21<sup>st</sup> century skills. For more details on the various populations mentioned above, see responses below.

Based on the current percentage of special education students in Delaware, in Year 1 of school operations DSA expects to have a 12.5% special education population, for a total of 25 students out of the 200 who will be enrolled in grades nine and ten. Two Delaware-certified Special Education teachers, who also hold at least one Highly Qualified content area certification, will be employed in Year 1 along with the Special Education Coordinator (SEC). As DSA grows and adds grades 11 and 12 in the two subsequent years, the school anticipates a similar proportion of special-needs students. By Year 4 of operation, when the school is at capacity, DSA will have two full-time, Delaware- certified special educators who serve as Special Education Coordinators, and at least four dually-certified special education/content area teachers.

DSA, with its unique approach to learning, will allow students with diverse needs (such a migrant, homeless, refugee, gifted, ELL, etc) and abilities to reach their full potential. The approach for serving students with identified special needs or those who are deemed at-risk will be community-based. Through the RtI process, blocks of intentional, intensive instruction at Tiers II and III for identified areas of struggling students' weakness will assist all students in achieving the academic standards.

The student schedule will include research and hands-on, PBL approaches which will provide the structure and flexibility necessary for an array of student needs. Teachers will work closely with those students who require additional support in terms of advocacy, educational planning and mapping, and college or career planning, ensuring that they are meeting their success plan benchmarks. For students who are at risk or are being served under an IEP or 504 Plan, teachers and/or related school personnel will provide all necessary accommodations and modifications to course and project work, assisting students in achieving performance expectations.

**2. Describe the school's plan for ensuring compliance with state and federal statutes and regs ...**

**a. A description of how the school will implement response to intervention procedures....**

DSA will implement all Response to Intervention (RtI) with fidelity. All students will be educated at Tier I, in the general education curriculum, with research-based instruction. Once a student is identified as having difficulty succeeding in the general curriculum, the student's team of teachers will review relevant data and implement appropriate interventions. If the student improves, he or she will continue in the general education program with those supports in place.

If the student's performance data does not improve and the student is not meeting benchmarks, DSA's Instructional Support Team (IST) will review the data and design interventions for the student. This will move the student into Tier II of the RtI process, with a minimum of 90 minutes per week of targeted, research-based intervention instruction. Progress monitoring of student performance and achievement in targeted skill(s) will be done

in six week cycles. If student performance increases and goals are met, the IST will decide if the student has made enough progress to transition back to Tier I and if any of the interventions should remain in place.

If the student does not make adequate progress in Tier II, as reflected by the progress monitoring assessment data, the student will transition into Tier III services. In Tier III, the student will receive a minimum of 120 minutes per week of targeted, research-based intervention instruction. Student progress is monitored on a six-week cycle by the teacher and the IST. Instructional intensity at both levels of additional intervention instruction is addressed through duration, frequency and time of interventions, and group size.

**b. A description of the evaluation process to determine eligibility for special education....**

DSA will use the RtI process with all students (see above). This will allow teachers and parents a carefully documented record of the student's strengths and weaknesses as well as documentation of strategies and accommodations that were implemented in an effort to improve learning outcomes. Once a student reaches Tier III of the RtI process and has not shown adequate growth, a student can be referred for a psycho-educational evaluation. Once parental permission is received, the evaluation will be conducted by a certified school psychologist to determine whether or not there are any identifiable disabilities hindering the student's academic success.

At any time, DSA parents or guardians who have specific concerns about the academic progress of their child may submit a written request for a psychological evaluation of their child to determine eligibility for special education services. In addition, teachers at DSA who suspect that a child has a disability may bring these concerns, along with data gleaned from assessments and research-based intervention practices, to the IST for their review and evaluation referral.

Once results of the evaluation are made available, the teachers, parents, school administrator, psychologist, and student will meet to discuss the results of the evaluation and determine whether or not, based on the recommendations of the psychologist and collected data from the IST, the student is eligible for an IEP. This same team will meet to craft that plan, taking into account Evaluation Summary recommendations, student performance data against grade level expectations and outcomes, as well as student college and career aspirations for appropriate transition planning.

**c. A description of how the school will regularly evaluate and monitor the progress and ....**

Each student's IEP will include measurable annual goals based on collected student data and current academic performance in identified areas of weakness. Annual goals will be broken down into measurable benchmarks that will allow for progress monitoring. Every two weeks, data pertaining to student goals will be tested and collected. Each quarter, parents will receive student goal sheets with updates on progress toward achieving annual goals. Having these multiple entry points and checks for student growth will allow educators to be formative in their decision-making and allow for conversations regarding the efficacy of each student's

educational plan.

**d. A description of how the school will provide a continuum of educational placements for...**

All students will be educated in their Least Restrictive Environment (LRE). As such, DSA will hold fast to the following IDEA principles:

- Special education is a service, not a place;
- All students with disabilities will have access to the general education curriculum;
- A broad range of services will be provided, addressing the needs of all students with disabilities;
- IEP teams will first consider providing each student with services in the general education classroom, with supplementary aids and services appropriate to that student's needs;
- A continuum of options will be provided that vary in the extent to which they provide education for a student with a disability alongside his or her non-disabled peers; and,
- Parents will have full access to a system of procedural and substantive rights and assurances that they are informed participants in educational decision-making—concerning both the services provided and the setting they are provided in—for their children.

Following these principles, for those students with disabilities who are likely to succeed with the help of well-designed, carefully implemented and rigorously assessed general education interventions, special education services will be delivered in the general education classroom through a full inclusion model. Where services delivered in the general education classroom are *not likely* to result in student success, a continuum of alternative options will be provided for all students with disabilities. At all times, DSA will comply with DE code 14 Del.C. §3110 for definitions of least restrictive environments<sup>7</sup>. Educational placement options shall include, but not be limited to, the following:

Services in the General Education Classroom

*27.1.1 Inside Regular Education Class >=80 percent of the day: Children with disabilities receiving special education and related services outside the regular classroom less than 21 percent of the day. This may include children with disabilities placed in: regular class with special education related service provided within regular classes; regular class with special education related services provided outside regular classes; or regular class with special education services provided in resource rooms.*

At DSA, general education services with supplementary aids and services, when needed, will be conducted in conjunction with related services, special education teacher support services, and collaborative team teaching, which is an element of the NTN model within the integrated courses. Based on the needs of the student and his or her IEP, the continuum of services within the regular classroom could include any of the following:

1. Instructional Adaptations:

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<sup>7</sup> Note that the listed codes and definitions were identified in consultation with Mary Ann Mieczkowski.

- Changing the manner in which information is presented, paced, or sequenced
  - Structuring support through a co-teaching model
  - Incorporating flexible grouping and instructional practices such as cross-age tutoring, heterogeneous grouping, and/or peer partnerships
2. Curriculum Accommodations:
- Changing how a student accesses information and demonstrates learning without substantially changing the instructional level, content or the performance criteria.
  - Using assistive technology, such as audio tapes instead of books, large print books, Braille materials, calculators, and/or word processors.
  - Providing individualized supports, such as the rephrasing of questions and instructions, testing modifications, and providing curricular aids such as highlighted reading materials, main idea summaries, organizational aids, pre-written notes, and/or study guides
  - Allowing additional time to move between classes; special seating arrangements; testing modifications
3. Curriculum Modifications:
- Changing what a student is expected to learn and demonstrate when participating in the general education curriculum
  - Changing the instructional level, the content and the performance criteria. While the student works on a modified course content, the subject area remains the same as the rest of the class
  - Redesigning the size, breadth or focus of the assignment
4. Behavior Intervention/Support Plans
- Addressing behaviors that impede learning through structured feedback loops that are appropriately timed based on the needs of the student

#### Part-time or Full-time Special Education Classes/Services

*27.1.2 Inside Regular Class <= 79 percent of the day and >= than 40 percent of the day: Children with disabilities receiving special education and related services outside the regular classroom for at least 21 percent of the day and no more than 60 percent of the day. This may include children placed in: resource rooms with special education related service provided within the resource room; or resource rooms with part time instruction in a regular class.*

At DSA, students who have an IEP indicated placement of inside the regular education classroom between 40% and 79% of the day will receive necessary classroom accommodations and modifications as mandated within their IEP when they are in their general education classroom(s). Part time or full time special education classes/services will also be delineated within the student's IEP as to which environment/setting will allow students the appropriate access to the general curriculum when the needs of the student are of an intensity that cannot be met within the regular education classroom. This can include part-time resource support, or resource room with part time instruction within a student's general education class.

*27.1.3 Inside Regular Class < 40 percent of the Day: Children with disabilities receiving special education and related services outside the regular classroom for more than 60 percent of the day. This may include children placed in: self-contained special classrooms with part time instruction in a regular class; or self-contained special classrooms with full time education instruction on a regular school campus.*

For those students who are in need of a specialized setting, full-time classes in specialized school settings will be provided when it is deemed by the IEP team that it is educationally justifiable and/or medically relevant.

#### Supplemental or Out of School Special Services

*27.1.6 Homebound and Hospital: Receives education programs in homebound hospital placement. Includes children with disabilities placed in and receiving special education and related services in: hospital programs, or homebound programs.*

At DSA, homebound instruction could occur for multiple reasons. When a student is not able to attend school for an extended period, he or she will receive his or her education at home until it is determined that he or she are able to attend the regular educational program.

This range of services is broad but will not be static for any individual student. As student progress is assessed, attention will be paid to the needed services, ensuring that services are provided in the least restrictive environment. Each time an IEP is developed for a student (e.g., as part of the initial evaluation, at annual reviews, and/or at other re-evaluations), general education with needed supplementary aids and services must be considered as an option.

#### **e. A description of how the school will organize and use instructional support teams to engage...**

At DSA, there will be a strong blended culture of discipline and academic excellence, with many people invested in the success of each student. With smaller class sizes, co-taught integrated content areas, and a student inquiry-driven, hands-on, project-based approach to learning, there will be many opportunities for every student to receive increased levels of academic and behavioral support to promote growth. If a teacher believes a student is in need of additional strategy instruction within the classroom to meet his or her specific needs, the teacher will bring those concerns, as well as data evidencing specific concerns, to the IST. Looking at each student on an individual basis, resources, strategies and supports will be determined, approved, and implemented in efforts to increase student success within the general education classroom. For students who do not respond to supports and strategy interventions put in place at Tier I of RtI, the team will work with the teacher to develop increased, specific strategy support using a research-based intervention to assist in promoting adequate growth.

#### **f. For students who are age 14 or entering the eighth grade or older, explain how the school...**

Students who are served under an IEP will already have elements of transition planning for college and career goals built into their IEP's. These transition elements will be revisited each year at the annual IEP review to ensure that they continue to align with the student's goals for

postsecondary success. For any student who becomes eligible for an IEP based on collected data and lack of achievement through the RtI process, transition and identification of postsecondary goals will become a part of the student's IEP. These measurable, post-secondary goals will be based upon age-appropriate transition assessments related to training, education, employment, and, where appropriate, independent living skills. The transition services and activities goals will be included in the IEP as well.

Because the build-out of post-secondary plans is individualized and student goals can differ, the appropriate people required at transition IEP meetings will vary depending on the needs of the student. However, the following people will be mandatory participants: the student, a parent/guardian, a regular education teacher, a special education teacher, and an administrator who will serve as the Local Education Agency (LEA) leader and assume responsibility for compliance with the IEP and executing the plan with fidelity.

**g. A description of how the school will employ qualified special education staff, including....**

The school leader will be assisted by the Innovative Schools' (CMO) Project Manager to recruit and employ special education teachers who are highly-qualified and certified in Delaware. The leadership team will use Innovative Schools' staffing services to access a national recruitment campaign and a rigorous screening process that makes available a large pool of certified teacher candidates based on the specific hiring needs of the school. Additionally, DSA will recruit Delaware certified teachers through multiple advertising venues, professional networking sites, and outreach with Delaware's institutions of higher education.

The special education staffing model for DSA includes a Special Education Coordinator (SEC) from the first day of the school's operation. This position is critical as there will be significant work to be done to organize special education records prior to the September 30<sup>th</sup> count. The school will recruit a certified and highly-qualified special education teacher who has experience in other public schools. This person will be responsible for coordinating the special education program, scheduling and facilitating IEP meetings, and monitoring and ensuring that the school is in compliance with all special education legislation.

In addition to the SEC, DSA will recruit dually-certified teachers in each content area to facilitate the inclusion model at the school. These teachers will serve as lead teachers and provide professional development and instructional models on teaching special education students in the regular classroom.

As the school expands grade levels, the special education staff will grow in correlation to the special education population and identified needs of the students. Given the state special education average of 12.5%, when built to full enrollment, the school will include 63 special education students who will be serviced by two special education coordinators and a minimum of four dually-certified special education teachers.

Other special education staff will be employed on a contractual basis and will provide evidence of their certification. All related service providers and school psychologist(s) will be contracted

to work with students in need of those services as documented in their IEP or recommended in the Psychological Evaluation Report and agreed upon by the IEP team.

**h. A description of how the school will ensure that staff are adequately trained and properly....**

DSA teachers will engage in trainings led by the SEC and special education teaching staff at the school so all teachers are knowledgeable of the IDEA regulations and the specific accommodations and modifications that are to be provided to students with special needs. These professional development sessions will ensure that all DSA teachers and administrators are knowledgeable in their roles and responsibilities in providing each student with a FAPE.

Each year, prior to the opening of school, professional development time will be devoted to a special education team-led session on the roles of each person involved in the IEP process. Additional information will be provided in delivering high quality, scientifically and research-based instructional strategies and practices to all students at DSA. Teachers will be led through the process outlining their duties to locate, evaluate and identify students with disabilities through the defined RtI process, as well as through recommendations to the IST. Teachers will also be trained in the Procedural Safeguards so that they have a firm understanding of the rights of special education students and their parents.

The special education team will create an “IEP at a Glance” sheet for each student who has an IEP. This will allow teachers to become familiar with the expectations for delivering high quality instruction that specifically imbed appropriate accommodations and curricular modifications for students as required. This promotes thoughtful communication and collaboration between special and general educators.

One meeting per month will be dedicated to special education topics as determined by staff needs. These meetings will allow for the special education team to review “IEP at a Glance” sheets for any newly identified or newly enrolled students. This will also be time for the special education team to share information from external professional development.

In Years 1 and 2 of operations, the school leader and SEC will have the responsibility of monitoring teacher compliance with accurate and timely data collection as well as ensuring that the needs of all students are being met through IEP delineated accommodations and modifications. By Year 4 of operations and beyond, DSA expects to hire an assistant principal who will assume responsibility and oversight for the special education services and regulations.

**i. Explain how the school will ensure parent participation in the IEP process in accordance....**

DSA will take steps to ensure that one or both of the parents of a child with a disability are present at each IEP Team meeting or are afforded the opportunity to participate. Parents will be notified of the IEP meeting no less than ten (10) school days prior to the IEP meeting, and the meetings will be scheduled at a mutually agreed upon time and place.

The notice sent to parents and the student about the meeting will include the purpose, time, and location of the meeting and who will be in attendance from the school or other agencies. Parents will be invited to extend the meeting invitation to other individuals who have knowledge or special expertise about the child. When appropriate, the meeting invitation will



also indicate that a purpose of the meeting will include the consideration of the post-secondary goals and transition services for the child.

If the parent is not able to attend the IEP meeting, then the SEC will talk with the parent via phone calls or conference telephone calls. In the event that the parent(s) refuse to attend the IEP meeting, the SEC will keep a record of the attempts to arrange a mutually agreed on time and place. The SEC will arrange for an interpreter for parents with deafness or whose native language is other than English. At the IEP meeting and whenever requested, the SEC will give the parent a copy of the child's IEP at no cost to the parent.

**j. A description of how the school will meet the needs of students with disabilities who....**

The IEP team will make a determination as to whether or not a student is eligible to take the DCAS – Alt1 on the basis of the criteria set by the *Participation Guidelines* found in the *Guidelines for Inclusion of Students with Disabilities and English Language Learners*. It is not an individual's unilateral decision but one that comes after a careful review of the criteria described in the Guide and existing documentation that supports the IEP team's decision.

In the event that a student from DSA is eligible to take the DCAS – Alt1, the student's teacher, who will be a Delaware-certified instructor, will attend the DDOE-sponsored training so that he or she can administer and score the assessment. If the student's teacher is not a Delaware-certified teacher, then the teacher will be accompanied to the DDOE DCAS – Alt1 training by the school's SEC, who is Delaware-certified, and the team will administer the DCAS-Alt1 together to meet the administrative requirements of administering the assessment in the presence of a Delaware-certified teacher or administrator, being familiar with the student's support needs and communication mode, and having attended one of the DDOE-sponsored trainings<sup>8</sup>.

**k. A description of how the school will ensure that IEP or 504 testing accommodations are....**

Students with disabilities may receive accommodations on the DCAS only if they:

- Are eligible for services under the Individuals with Disabilities Education Act (IDEA) or Section 504; and
- Have an Individualized Education Program (IEP) or 504 plan and instructional program that include accommodations and/or assistive devices in the instructional process.

Students are eligible for the test accommodations allowable on the DCAS that are also in their IEP or 504 Plan. Students who have been formally identified through the IEP or 504 process but do not have accommodations or assistive devices documented in their plans are not eligible for any accommodations during the DCAS.

The SEC will attend any DDOE training offered on administering the DCAS to students with IEP or 504 accommodations to ensure that he/she is current on all new or updated accommodations, regulations, policies, and procedures. At the beginning of each school year, the SEC will review the IEP and 504 plans of students and complete the DCAS Students with Disabilities Form. To ensure that students receive their testing accommodations, one month

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<sup>8</sup> <http://de.portal.airast.org/wp-content/uploads/2013/06/DCAS-Alt1-Fall-2013-SAC-Manual2.pdf>

prior to the testing window opening the SEC will meet with the Assessment Coordinator to review the accommodations documented on students' IEP or 504 plans and the subsequent Student with Disabilities Form. Using these documents as a guideline, the Coordinators will work with school administration to plan the test administration for those students, including making arrangements for special space arrangements, alternative testing times, appropriate staffing, and communications with the test administrators about testing accommodations. One week prior to the DCAS administration, the SEC will ensure that all accommodations are entered into the DCAS Accommodations database<sup>9</sup>.

### **3. Explain how the school will meet the needs of English Language Learners (ELL), immigrant...**

#### **a. Explain the school's process of identification of ELL students and the subsequent provision...**

- Home Language Survey

All incoming students will be given the Home Language Survey as part of the enrollment process at DSA. The Home Language Survey that will be included in enrollment packet is in Appendix B-11.

- Initial diagnostic test for English language proficiency

If any questions from the Home Language Survey indicate that a student's home language is something "other than English," DSA will give the WIDA-ACCESS Placement Test (W-APT) to the student<sup>10</sup> to determine if the student should receive services as an English Language Learner. Even if a student's performance on the W-APT is above a 4.0, ELL placement may be indicated based on information from family members and school personnel.

- Parent notification

After a student is identified as an ELL, DSA will send a notification home to parents in the home language, stating that their student is eligible for English language development services. Parents/guardians have the right to refuse placement of their student in the ELL programs and also have the right to withdraw their student from the program, but must do so in writing. In compliance with 14 DE.C, Chapter 31, parents of students who have been identified as English Language Learners will be provided notice that their student is eligible for services in a language the parent can understand. If needed, the school will contract with a translation company to translate documents. At the beginning of the school year, identification, screening and parental notification of eligible students will be given within 25 days of the start of school or enrollment, whichever timeframe is greatest.

#### **b. Describe the research-based English language instructional program and list the type of....**

All programs of instruction for ELLs will include formal instruction in English language development and instruction in academic subjects so that ELLs have access to the regular curriculum that is provided for all students. Programs will be in consistent pursuit of the goal of acquisition of English proficiency.

In order for the necessary accommodations to be made so that teachers can teach the diverse learners that may exist in their classrooms at their current level of content and language acquisition, teachers will be trained in how to deliver multiple assessments whose data will

<sup>9</sup> [http://de.portal.airast.org/wp-content/uploads/2013/06/Guidelines\\_for\\_Inclusion\\_2013-14\\_V2.pdf](http://de.portal.airast.org/wp-content/uploads/2013/06/Guidelines_for_Inclusion_2013-14_V2.pdf)

<sup>10</sup> Specific information on the WIDA in Delaware can be found at <http://wida.us/membership/states/Delaware.aspx>

provide information that can be used in planning for interventions and strategy instruction. Based on the ACCESS for ELLs (Assessing Comprehension and Communication in English State-to-State for English Language Learners) and the English Language Development (ELD) Standards (debuted by WIDA in 2012), teachers will use the assessment data to plan lessons which assist and assess students' abilities to achieve English language acquisition. Using resources from the World-Class Instructional Design and Assessment (WIDA) and the Sheltered Instruction Observation Protocol (SIOP) teachers will be trained to provide students with appropriate opportunities and differentiation to access both the content and language objectives. The teachers at DSA will be diligent in their strategy choices, being sure to provide content and strategy instruction at the level of a students' comprehensible input in order to challenge, but not frustrate, English language learners.

**c. Explain the process for ensuring that ELL students receive the appropriate annual...**

After their initial identification as an ELL student, all ELL students will be assessed annually on the ACCESS for ELLs (Assessing Comprehension and Communication in English State-to-State for English Language Learners). The assessment will be coordinated through the school leader and teachers administering the assessment will attend the DDOE training.

**d. Explain the school's exit criteria and process for transitioning ELL students from the program.**

All ELLs will be provided with ELL services until they reach a Tier C Level 5.0 on the WIDA ACCESS test and can be exited from the ELL program.

**e. Describe the ELL parent involvement program and/or activities that lead to the ....**

Parents of ELL students will play a critical role in their child's cultural assimilation to DSA and must become active members of the school community. The goal of assimilation is not to strip the child of his or her native culture, but to create a school culture that embraces diversity and allows differences to enrich the whole school community. The school leader, teachers, and staff must work in conjunction with parents to ensure that ELL students are successful members of the school community.

The Parent's Advisory Committee (described below) will ensure that when the school hosts curriculum nights and other parent events, special outreach is done to the parents of the ELL students in their home language. This will include translation services so that invitations and announcements of activities can be sent in the family's native language. Additionally, translation services will be provided at school events for parents so that they may come and participate in curriculum and information nights to learn about the school, student conferences or exhibitions so they can learn about their student's academic progress and at other school events so that parents can participate in the culture of the school.

Since all parents will be encouraged to volunteer at the school, the Parent's Advisory Committee will include opportunities for the ELL parents to volunteer by including volunteer activities that are not based around language or strategically partnering parents who don't speak English with another parent who can serve as a translator as needed. By contributing to the success of the school through volunteering the parents will grow more connected to the school and the partnership between the parent and the school will be strengthened.

**f. Explain how the school will screen for the identification of migrant students for....**

DSA will screen for the identification of migrant students through the enrollment process. Parents will be asked to complete the Student Residency Form that includes the three questions used for screening for migrant students:

1. Have you moved across state or district lines in the last three years?
2. Do you or have you worked in the agriculture, fishing, food processing, dairy, or poultry industries?
3. Was your move related to your work?

If the Residency Form shows a “yes” response to the three questions, the school leader will ensure that the designation of “migrant” is checked in eSchool Plus. The school will also communicate with the state recruiter who will interview the family and determine if the child meets the eligibility criteria of a migrant student.

**4. Explain how the school will identify and meet the learning needs of students who are at risk....**

The school will implement the RtI process with fidelity. Students who are identified as being at-risk and/or who are performing below grade level expectations will have additional instruction in their identified areas of need, receiving either 90 or 120 minutes of targeted, research-based instruction to assist in raising achievement scores and removing obstacles to learning. Through DCAS, NWEA MAP, observation, anecdotal notes, curriculum-based measures, and formative assessments, teachers will have multiple opportunities to assess student acquisition of grade-level content and growth toward grade-level expectations.

At DSA, time and resources will be used in innovative ways. Special Education teachers will provide strategies and resources to other teachers to work with students who are identified at-risk. The classroom teacher or the special education teacher may provide targeted small group workshops within the project-based learning structure to any student who is struggling with a specific skill. Additionally, intervention time for all students will include small group instruction with the RtI interventionist and blended learning through computer programs such as Compass Learning which will provide a specific learning pathway for students based on their assessment. Additionally, Compass Learning will provide the benchmark assessments that teachers can use to monitor achievement.

**5. Explain how the school will address transition planning for students with disabilities..**

For students entering DSA who are served under an IEP, transition planning will be a part of the documentation, with post-secondary goals related to training, education, employment and, where appropriate, independent living skills embedded in the plan. When a student’s IEP is revisited annually to reflect academic achievement and growth, transition planning will continue. This will include planning services and activities, including courses of study that are needed to assist the student in achieving postsecondary goals.

**6. Explain how the school will identify and meet the needs of gifted students, including:****a. The specific research-based instructional programs, practices, strategies, and opportunities....**

The hands-on, inquiry-based, project-based approach to learning that is part of the NTN model will allow gifted and talented students increased autonomy. All students will be charged with

fulfilling a role on a project team. Gifted students will have the opportunity to self-select roles and assist with identifying the responsibilities and deliverables that may go above and beyond teacher-defined curricular deliverables.

Teachers will work with gifted students individually and in small, flexible groups to challenge them. While all students work through the same rigorous projects, 'project challenges' are required for those students who are gifted and talented and who are receiving a weighted grade for the course. 'Project challenges' allow students to extend their learning by exploring an interesting complexity of the problem, conducting additional research, or answering a "What if" question that changes the parameters of the project design.

NTN offers blended learning and distance learning opportunities for gifted students to accelerate their learning. The flexible schedule of a NTN school will allow gifted students to attend college courses and internships in the local community.

**b. How the school will provide qualified staffing for gifted students.**

The goal will be to recruit teachers who have experience working with a gifted and talented student population for these roles. In addition to the on-staff expertise in the area of special student populations, the school, through its mission to engage the larger community in unique school-community interactions, will seek opportunities for its gifted students to explore ways to enhance their learning through the use of their strengths and talents.

The Delaware Statewide Advisory Council on Programs for the Gifted and Talented has adopted the National Association for Gifted Children (NAGS) program standards as a guide for educational programming. The teachers at DSA who are responsible for the education of highly able students will promote the opportunity within lesson and project planning for students to engage with and attain gifted programming standards in the areas described in Appendix B-12.

**c. How the school will assess and monitor the progress and success of gifted students.**

DSA will assess and monitor the progress and success of gifted students one time per month to ensure that the opportunities for enrichment are maintaining the interests of the student and providing a level of supplemental challenge that promotes enhanced learning. Because DSA will be a place where students are authentically assessed for both content and 21<sup>st</sup> century skill acquisition through the use of culminating products, portfolio- and performance-based assessments, these methods will also be used for the gifted and talented students, and differentiated to require them to think more creatively about complex challenges. In addition to these NTN assessments, DSA will also assess students through their creative outlets and creative, project-based products. Gifted students will have increased levels of control over the implementation of their projects to further enhance the opportunity to have a voice in their education and assessment of knowledge acquisition.

An integral part of how the school will monitor the success of gifted students will be based on how gifted students assess themselves. Students will define their expectations for personal

achievement and success thereby increasing their autonomy in the learning process and laying the foundation for lifelong learning.

**7. Explain how the school will identify and meet the needs of homeless students...**

DSA will identify homeless children in accordance with 14 Del Code 901.2.0 which defines homeless children and youths as individuals who lack a fixed, regular, and adequate nighttime residence and includes:

1. Children and youths who are sharing the housing of other persons due to loss of housing, economic hardship or similar reason; are living in motels, hotels, trailer parks, or camping grounds due to lack of alternative adequate accommodations; are living in emergency or transitional shelters; are abandoned in hospitals; or are awaiting foster care (in Delaware that includes children in foster care).
2. Children and youths who have a primary nighttime residence that is in a private or public place not designed for or ordinarily used as a regular sleeping accommodation for human beings.
3. Children and youths who are living in cars, parks, public spaces, abandoned buildings, substandard housing, bus or train stations, or similar settings; and migratory children who qualify as homeless because the children are living in circumstances described above.

The school will identify a Homeless Education Liaison (HEL) who will work in coordination with school personnel and other agencies to identify students in homeless situations and ensure they receive the services to which they are entitled. Strategies to identify homeless children include:

1. **Relationship Building:** The HEL will identify and develop relationships with community service agencies in the local area, such as shelters, soup kitchens, food banks, transitional living programs, street outreach teams, drop-in centers, community action agencies, faith-based organizations, and local motels or campgrounds. The HEL will meet with representatives from these organizations at least once a year to share information and to collaborate on issues such as the identification of homeless children, the school enrollment process, transportation, and other student services. If there is not a protocol in place, the HEL will work with the organizations so that when children come through their programs, a protocol is in place to assist in determining whether or not the child is homeless and communicating with the HEL at the school.
2. **School Residency Survey:** The HEL and school leader will develop a residency questionnaire that students will complete during the enrollment process. Surveys that may indicate homelessness will be sent to the HEL for a final determination of homelessness.
3. **School Screening:** The HEL will compile addresses of shelters, motels, transitional living programs, and campgrounds frequently used by families and youth who are homeless, and provide these addresses to the school secretary. The secretary will be asked to help identify homeless students by the addresses they list on school paperwork and discreetly provide expedited enrollment and referrals to services the families and youth may need. The HEL will maintain communications with the school secretary around students who are “doubled-up” (living temporarily with another family) or who have made numerous school transfers.

4. **Awareness Training for Staff:** Teachers and other school staff members who are closely connected to students often know of students who are staying temporarily with relatives or another family, are staying at campgrounds or in their car, are living at motels, or have moved several times in a year. Initially teachers and staff may not consider these children to be homeless because of traditional homelessness stereotypes, but through training, teachers and staff will be able to use the Signs of Homelessness Handout (Appendix 13) to assist in the identification of homeless students.

When a homeless student is identified, the HEL will ensure that he or she is promptly enrolled (if not already enrolled and if there are open seats) and will begin to advocate for the student so that he or she is able to access a full and fair opportunity to succeed in school and to receive the educational services for which the student is eligible and which are equitable to all other students at the school, including access to the academic program, instructional materials, intervention or acceleration (Gifted and Talented) programs, extracurricular activities, field trips, etc. Through the school counselor, the HEL will ensure that the student receives guidance on how to apply to colleges and available resources for funding a college education. The HEL will also work with the student's parents/guardian, school's transportation company and the district/school of origin to ensure that the student has transportation to DSA. Homeless students will not be turned away from DSA as long as open seats are available in accordance with approved enrollment numbers.

The HEL will also coordinate training for school staff on homelessness and the McKinney-Vento Act. This will ensure that all school staff understand the federal law and homeless policies and procedures, and have the knowledge, skills, and disposition to provide a positive and caring environment for children, including those who are homeless, that they facilitate homeless children's access to the entire school program, and that they provide them instructional support that enables them to succeed. This training will include a session at the beginning of the school year so that teachers are trained to recognize signs of homelessness and are fully aware of the schools protocols and policies for referring a student to the HEL and assisting the child and family with discretion. The HEL will meet with grade level teams at least once a semester to provide professional development on strategies for assisting homeless children and will conduct full staff homelessness awareness training at least one more time during the school year.

The HEL will prepare the professional development sessions using the extensive resources (video series, discussion guides, webinars, PowerPoint presentations, and print materials) from the National Association for the Education of Homeless Children and Youth and the National Center for Homeless Education. The HEL may also arrange for speakers to come in from local community organizations who regularly work with homeless families and children to share their expertise with the teachers and staff.

**Student Recruitment and Enrollment [14 Del. C. § 512 (6) and (8)]****1. Identify the maximum enrollment *school-wide* and *per grade level* that the school ...**

| Grades                | Number of Students |                   |                   |                   |                   |
|-----------------------|--------------------|-------------------|-------------------|-------------------|-------------------|
|                       | Year 1<br>2015-16  | Year 2<br>2016-17 | Year 3<br>2017-18 | Year 4<br>2018-19 | Year 5<br>2019-20 |
| 9                     | 175                | 150               | 150               | 150               | 150               |
| 10                    | 75                 | 175               | 150               | 150               | 150               |
| 11                    |                    | 75                | 175               | 150               | 150               |
| 12                    |                    |                   | 75                | 175               | 150               |
| <b>Total Students</b> | <b>250</b>         | <b>400</b>        | <b>550</b>        | <b>625</b>        | <b>600</b>        |

**2. Provide evidence of student demand that would allow the school to meet the intended...**

The Delaware STEM Academy has made a strong effort to reach out to parents, educators, local community members and businesses about their proposed school. Data from the survey provides a strong indication that those who learn about DSA would consider enrolling their child in this type of academic program as evidenced by 92% of respondents stating they would consider enrolling their child in a school that uses the New Tech program and 81% stating that they would consider enrolling their child in a school with a STEM curriculum. STEM and engineering related businesses have also shown strong support for the school. Enrollment trends in local public high schools and private schools indicates that the number of students that DSA hopes to serve is also realistic and would have a minimal impact on enrollment at other high school options (district, charter or vo-tech) - just 3% - and perhaps less than 3% in light of projected population growth. Furthermore, in 2013, the Delaware Charter Schools Network shared data that 4,000 students across the state are on charter school waitlists. DSA could serve as a viable school option for some of the high school aged children on charter school wait lists who are living close enough in proximity.

**3. Explain the plan for student recruitment and marketing that will provide equal access to any....****a. The recruitment strategies that the school will employ to attract each subgroup to the...**

To ensure that the Year 1 enrollment target of 175 freshmen students and 75 sophomore students is met, recruitment strategies for DSA will focus on two key New Castle County audiences: (1) rising high-school-aged students (specifically teenagers aged 12-15) and (2) parents of rising high-school-aged students. The goal of recruitment will be to have a diverse student population that has a 50:50 male-to-female ratio.

The school will make an effort to ensure that all families and potential students, including families in poverty, academically low-achieving students, students with disabilities, and other youth at risk of academic failure, are reached. The Board, school leader, and CMO will by:



- Visiting local public middle schools that serve a diverse student population to share information;
- Conducting a targeted advertising campaign in diverse neighborhoods throughout New Castle County to ensure that all families have opportunities to learn about the school;
- Hosting parent information sessions in different parts of New Castle County, including local community centers and churches, to ensure that meetings are accessible to all families;
- Hosting at least one parent information session with a language translator (most likely Spanish, unless a concentration of another language is determined);
- Offering free child care and refreshments to make attendance at parent information sessions easier for families who have young children;
- Working with local press outlets to publish stories about the school's progress; and,
- Developing a website and print information about the school and the process for enrollment for families who are unable to attend parent information sessions in person.

Through this outreach plan, the Board believes that it will recruit a diverse student population that reflects student demographics similar to other high schools in New Castle County.

To execute its marketing plan, the ad hoc Marketing and Student Recruitment Committee of the Board, the school leader, and the CMO Project Manager will work together on student recruitment. For Year 1 recruitment, materials will be developed immediately following the approval of the school's charter. The bulk of community outreach and student recruitment would begin in September 2014 and conclude in January 2015 if maximum enrollment has been reached. Should the school have an excess of applications for open seats, a lottery will be held after the January deadline, and the outcome of the lottery will be communicated to all applicants in February 2015. If not fully enrolled, the school will continue to hold recruitment events until maximum enrollment has been reached or until the September 30<sup>th</sup> count. Students and parents will receive enrollment packets in March 2015, prior to the school's opening. This timeline will be repeated in subsequent years. For a more detailed Marketing Plan, Tools and Strategies, and Timeline, see Appendices B-14-a, b, and c.

**b. A brief explanation of the efforts, resources, structures, or programs that the school will...**

The Board believes that students and families will stay at a school if the school has a positive learning environment, a high quality educational program, and where the family feels connected to the school.

**Positive Learning Environment**

By implementing the NTN school design, DSA will have a strong school culture that is built around "Trust, Respect, and Responsibility." In their academic classes, students will be taught how to work in teams and value each other's contributions. In their advisories, all students will be taught the value of individual gifts and how they contribute to the team. Each year, the school will run an anti-bullying campaign.

Discipline issues are historically very low in deeper learning schools such as NTN (NTN Effectiveness Data – Appendix A-3). Such issues will be resolved quickly, using the practices of

Restorative Justice so that the culture of the community is maintained (see question 5(a) for more information on Restorative Justice). School culture data, such as attendance data and discipline data, will be monitored on a monthly basis as part of Innovative School's monthly reporting through a data dashboard to note patterns and trends. As attendance and discipline issues are correlated with academic performance, this review may reveal issues that impact the academic performance of students.

**Disaggregated Data**

It is important that students across demographics are succeeding academically. Each month the school leader, in partnership with the school's CMO will examine the academic metrics of the schools' data dashboard, including disaggregated student data, which will reveal patterns and trends over time. Early in the year, disaggregated cells will be examined by student name to reveal which students fall into multiple cells. These students will warrant special attention by the school leader and Innovative School's program manager through the monthly data dashboard discussion. Following the initial meeting between the school leader and the CMO program manager, the school leader will share the disaggregated data dashboard with the grade level teams through a data review meeting. At this meeting, the school leader will work with teachers to examine the disaggregated data to ensure that all students are meeting academic benchmarks and growth targets. In the event that students are not meeting benchmarks, the grade level team will do a detailed analysis of student level data, talk with the student and his or her parents about the data, and collaborate with the student and his or her parents to develop an Individualized Improvement Plan or Academic Contract (see question 7 on page 9 above) that outlines specific strategies to improve academic success. This plan will be monitored on a regular basis through a data dashboard to note patterns and trends.

**Outreach to Parents**

DSA will organize a Parents' Advisory Committee that will meet quarterly to advise the school leadership on upcoming programs and to provide feedback. The committee will be established specifically to reflect the diversity of the school and parents will be recruited from all demographic subgroups. Over the course of the year, the committee will monitor the application process to ensure that marketing and outreach activities are scheduled for diverse communities and that incoming applications to the school reflect a diverse population. If any student leaves DSA prior to graduation, a member of the Parents' Advisory Committee will contact the parents for an exit interview to collect data on why the student is leaving and to solicit advice on how to retain students in the future.

Parents will be asked to volunteer at the school to increase their ownership and participation in the education of their child. Volunteering in the school is not a condition of enrollment; however the school leader will work to educate all parents on the value of their participation in the education of their child. To ensure that all parents have the opportunity to volunteer, the school leader will work with the Parents' Advisory Committee to develop a list of volunteer opportunities that is accessible to all parents and requires various levels of skill and time commitment. Parent volunteers will be coordinated through a Parent Volunteer Coordinator at each grade level who will report to the Parents' Advisory Committee.

Special outreach will be done for the parents of disadvantaged students to facilitate high levels of participation in academic school activities. To empower all parents to participate, information will be sent home and made available on the school website. All parents will be notified of upcoming academic activities through a school phone notification system. During curriculum nights, parents will be educated on how to help students study and do homework, PBL, and other academic topics. Each semester teachers will report to the school leader on which parents are in attendance at academic events and which have not participated so that additional outreach may occur.

**4. Provide, as Attachment 7, the school's Enrollment Policy and Withdrawal Policy...**

**a. Any admission requirements, including an explanation of the purpose of....**

There will not be any admissions requirements DSA aside from a Delaware residency requirement.

**b. Any admission preferences in accordance with 14 Del. C. § 506(b) and....**

The admissions preferences are in accordance with 14 Del.C. §506(b), and are: 1) Children with siblings concurrently enrolled at DSA; 2) Children of the school's founders (no more than 5% of the school's total enrollment); and, 3) Children of staff members employed on a permanent basis at the school for at least 30.0 hours per week during the school year. They are further described in the school's Enrollment Policy, found in Attachment 7-A.

**c. To the extent practicable, each charter school shall establish a timeline for its application...**

In accordance with HB 90 w/ HA1, the timeline for the applications and admissions process shall align with the requirements specified in the law and the public school choice program. The open application period will operate from November 1<sup>st</sup> until the 2<sup>nd</sup> Wednesday of each calendar year. Following this initial deadline and if under-subscribed, DSA will reopen for applications for enrollment and continue to accept them as they are received.

Should a lottery become necessary due to over-subscription, one will be held prior to February 15<sup>th</sup>, with the date to be published prior to the end of January. The procedures for holding the lottery may be found in the Enrollment Policy contained in Attachment 7-A.

DSA will use the required Delaware Standardized Application for Education Options.

**d. Policies and procedures for student waiting lists, withdrawals, re-enrollment, and transfers.**

The procedures for student waiting lists, withdrawals, re-enrollment, and transfers may be found in the Enrollment Policy contained in Attachment 7-A.

**e. A timeline and plan for student recruitment and enrollment.**

The timeline for student recruitment and enrollment is defined above.

**f. Plans to maintain on file a written statement, signed by the parent or guardian of each....**

In accordance with 14 Del. C. § 506 (c)(3), parents will sign an enrollment letter prior to their enrollment in the school acknowledging their understanding of the commitment for their child

to attend the charter school for at least one full year. A sample student enrollment letter may be found in Attachment 7-B.

**5. Student Discipline [14 Del. C. § 512 (6), (7) and (11)]**

**a. Describe the school's planned approach to student discipline.**

Expectations for student conduct, including the concepts of trust, respect and responsibility, will be clearly articulated in the Code of Conduct, the Student/Parent Handbook, and during advisories at the beginning of the academic year. Opportunities for continued discussions will occur on a regular basis between students and their advisors, families, and school leader. If a student fails to meet expectations for conduct, the situation will be resolved through methods of Restorative Justice, such as mediation, reflection, and reparation of the misdeed. Working with the advisor, the school leader, parents, peers, and others, depending upon the individual circumstances, the student will identify the root problem reflected by the misbehavior and address it. Information on Restorative Justice is in Appendix B-8 and B-9.

DSA will provide training and professional development to all teachers, administrators, and staff to assure that all state and federal laws are followed in student discipline. DSA will ensure compliance with 14 DE Admin Code 601 and 14 Del Code §4112 that school administrators will attend required DDOE trainings about the mandatory school crime reporting law and staff will receive training on their duty to report certain incidents of misconduct to school administration under this regulation and statute. In addition, administrators will utilize the DDOE School Climate and Discipline program manager and Department of Justice (DOJ) Ombudsperson for technical assistance in regard to the Mandatory School Crime Reporting Law.

**Staff Training and Implementation for Students with Disabilities**

DSA will provide professional development of all teachers, administrators, and staff, to assure that all state and federal laws are followed in the discipline of students with disabilities. The school leader and/or appropriate staff will attend all state provided trainings on the education and discipline of students with disabilities so that DSA remains compliant at all times. At DSA, all administrators, teachers, and staff will be trained to utilize Restorative Justice Practices. This allows the school leader, teachers, and staff to model conflict resolution skills and build stronger relationships by providing alternative approaches to discipline.

**Specific Action Steps for Compliance**

In the case that a student is in violation of DSA's behavior expectations, the SEC will collaborate with the school leader and counselor to adhere to all disciplinary provisions of the Individuals with Disabilities Education Act, Section 504. Discipline of a student with a disability will be handled on a case by case basis, with careful attention paid to ensure that at no point is the student's right to a FAPE jeopardized and that all due processes will be followed in order to ensure that the student's rights are safeguarded.

## 1.4 Performance Management

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*14 Del. C. §§ 512 (4), (5), (6) and (7)*

**1. Describe any mission-specific academic goal(s) that the school plans to use....**

The Delaware STEM Academy (DSA) will not use any mission specific academic goals.

**2. If you are proposing to serve students who are at-risk of academic...**

While it is likely that DSA will serve students at risk of academic failure, the Board does not seek waivers or exemptions.

**3. Describe how the school leadership will oversee and monitor compliance with statutory....**

The Board will ensure that all statutory requirements measured by the Organizational Framework are met. Each of the criteria from the Organizational Framework which is listed in the “Meets Standard” performance rating will be included in these governance documents and will be monitored on a regular basis. Each month, the school leader will collaborate with Innovative Schools to compile a report for the Board. This report will include metrics from all three areas of the Performance Framework: academic, financial, and organizational. This report will be shared at every board meeting as a regular agenda item.

**1. Explain how the school Board and school leadership will measure and evaluate the....**

The Board and school leadership team will regularly review individual students, student cohorts, and aggregate school data using the assessment tools that include the Delaware Comprehensive Assessment System (DCAS) test, the NWEA Measures of Academic Progress (MAP) test, end of course assessments, project rubrics, and other subject specific formative and summative measures. These are outlined in the Assessment Calendar (Appendix C- 1).

The school leader will be responsible for the collection of school-wide data on assessments, although much of the data is automatically uploaded to eSchool and the Insight Data Dashboard. Teachers will have access to the assessment data from DCAS, NWEA MAP, and ECHO for those students assigned to their grade levels and will be able to use those data to inform instruction and build flexible groups.

DSA students in grades 9 and 10 will take the DCAS for reading and math in the fall and in the spring. This data will be disaggregated into cells based on the Federal requirement that all student subgroups are making Adequate Yearly Progress (AYP). In addition to the DCAS, all students at DSA will be assessed using the NWEA MAP assessment three times per year starting in the fall. This adaptive test adjusts to each student’s true academic level, and group students into bands performing at the same level. It also establishes growth targets based on this initial performance which, in turn, sets realistic goals to ensure all students are achieving growth. The school leadership team will closely examine both sets of standardized data, and align their list of students who require the greatest amount of performance monitoring with the work of the individual teachers and their Professional Learning Communities (PLC’s).

From this initial data collection and subsequent review, the school leader will meet with each grade or subject level team in their PLC to discuss each student and to divide students into cohorts based on student performance. As a team, teachers will determine how often each student's academic growth needs to be monitored: 1) bi-weekly for those students who have the largest growth targets, fall into the lowest quartile, and fall into multiple cells which are not meeting AYP goals; 2) monthly for those students whose growth targets are a little less aggressive, fall into the 2<sup>nd</sup> quartile, and fall into cells which are not meeting AYP goals; or, 3) as part of the regular data review cycle for the school.

Each team will develop a data review calendar, aligned with the school-wide Assessment Calendar (Appendix C-1) that assigns a group of students to specific review dates, depending on how often the data needs to be reviewed for that student. To aid in the monitoring component, the team's data review calendar will align with the RtI calendar. Teachers will be reviewing data regularly in PLCs to assess the strengths and growth areas for each student and to use that data to revise upcoming projects, differentiate instruction within projects, pull together flexible groups to reinforce or teach skills and strategies and to build the capacity of students to use what they have learned through the application of the project. The school leader will meet with the PLC teams at least twice a month to monitor the data reviews and data use by the team to ensure that data is being used to drive instruction and that academic achievement is being monitored as planned.

An essential component of data use at the school will be to build students' knowledge capacity to understand assessment data, and link their own assessment data to a learning plan to achieve high-quality work. As teachers are working to understand and sort the assessment data of their students, they will also be working with their students to share assessment results and to talk with each student about his/her personal learning benchmarks. The students will be asked to work with their advisor (who is one of the content teachers on the team), to create several goals for learning that are in alignment with their assessment data. Through each quarter, students will collect artifacts that demonstrate they are reaching their self-selected benchmarks. As the teaching team continues to collect assessment data, the advisory will share it with each student and work to revise goals and document learning so that the student is able to reflect on his/her learning and achievement of learning benchmarks.

As part of the NTN learning cycle, as students complete projects, they are asked to reflect on their work and evaluate themselves and their teammates on how well each of them met each of the 21<sup>st</sup> century skills standards with a project rubric. The group rating system informs the teacher as he/she is working to complete the rubric for each student. The teacher can use this data to conference with specific students around how well they are working with others on the projects and other 21<sup>st</sup> century skills. Furthermore, this information can be used by the teacher to build project groups specifically to make sure that each student's work is targeting specific areas needed for growth.

To monitor the RtI process, the school leader, Special Education Coordinator (SEC), and Innovative Schools will drill down into the data of special needs children, tracking the number

of students in each RtI tier and the movement of students between tiers. As the school begins operations, the school leader and SEC will track IEP meetings to ensure that all documentation for special education students is in compliance.

Data will be reported to parents through regular newsletters from the school and in a link to the DDOE developed school profile. Additionally, when parents come to the school for learning conferences, their child will take them through their portfolio of work, beginning with their assessment and data, aligning to their learning plan, and then showing the artifacts that demonstrate learning and achievement of benchmarks.

To assist the Board in its governance role during the planning year, the school leader, board chairperson, and the CMO will finalize a schedule of data review for the monthly board meetings that is based on the Performance Framework. Once finalized, this schedule and regular data monitoring will allow the board to track data trends over time and monitor the progress of the school as it pertains to the Charter School Performance Frameworks and Delaware STEM's Performance Agreement. School-wide data can also be reported to the faculty, media, and used in promotional materials for the school.

## **2. Describe the corrective actions the school will take if it falls short of student academic...**

If the data suggests that the DSA will not meet its Performance Goals, the board will begin a process of gap analysis and course correction to see what areas of the school need attention and support. The process of gap analysis will include an in-depth analysis of the following areas of school operations. This is critical, because although student achievement is the "red flag" that calls attention to a problem, the classroom and academic program may or may not be the root cause. An effective gap analysis will collect data in the following five areas: (1) School Culture/Academics; (2) Organizational Leadership/Governance; (3) Financial Integrity and Soundness; (4) Operational Effectiveness/Compliance; and (5) Community/Parent Relationships.

The gap analysis will be conducted by the school leader, executive director, and Innovative Schools, with oversight provided by the Board. The gap analysis will involve an instructional culture survey; interviews/focus groups with students, teachers, and parents; conversation with the board; surveys/document analysis; building walkthroughs, and a thorough analysis of disaggregated data. Based on the gap analysis, and the discovery of root causes for the lack of student achievement, the board, in collaboration with Innovative Schools and the school leader, will develop the goals and action steps that are aligned to and organized by the five areas of school performance outlined above and the Delaware Performance Framework for charter schools and take the necessary steps to improve student performance. The school leader and Innovative Schools will be given the task of implementing the plan and following through on all deliverables. All sections of the action plan and the metrics defined to measure the deliverables will be monitored on a monthly basis at regular board meetings.

## **3. Describe how state data systems will be used and monitored to support informed....**

The DSA will use eSchoolPLUS to manage student performance data and IEPPLUS for special education program management. DSA will use the DDOE's Education Insight Dashboard to create an aggregate of student performance data. The dashboard provides a central

location for all data pertaining to a specific student. The school leader will be able to view and print reports on attendance, discipline and longitudinal data and run accountability, achievement, certification, or demographic reports. Parents will also be connected to the performance of their children through the Home Access Center which allows parents 24 hour access to student's grades and attendance.

The heart of managing the instructional program is Echo, NTN's learning management system, which is designed to support project-based learning (PBL), facilitate communication and collaboration, and improve teacher practice<sup>1</sup>. Teachers, students, and parents at the Delaware STEM Academy will use Echo on a daily basis to access course resources, project plans, assignments, a multi-dimensional grade book, online groups, and an extensive library of instructional resources for teachers. Google Apps for Education is seamlessly integrated into the platform, providing schools with a powerful suite of communication and publishing tools including Gmail, Google Docs, and Google Sites.

Echo is delivered as a web-based service that is accessible at all times via any web browser with an Internet connection. For a more in-depth description of Echo, see Appendix C-2.

The professional development around using and interpreting data will take place in both whole school professional development sessions, through embedded and contextualized support in PLCs, and in individual coaching sessions. The school designer from NTN, in collaboration with Innovative Schools and the school leader, will use the information available through eSchool Plus and Echo to model for teachers how to take a class set of data and use it to place students in flexible work groups based on common areas for growth. After the whole group professional development, the NTN coach will work with individual teachers or teams to talk about how instruction can be adjusted and daily agendas can be created to meet the needs of individual students, cohorts of students, and/or the whole class.

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<sup>1</sup> Echo is currently being used at the Delaware New Tech Academy at Seaford High School.



## 1.5 Staffing

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*14 Del. C. § 512 (6)*

### **Staff Structure** *[14 Del. C. § 512 (6)]*

- 1. Provide, as Attachment 8, organizational charts that show the school governance, management, and staffing structure in Year 1 and at full expansion.**

An organizational charts and position descriptions with data about staff to student ratios are included as Attachment 8-A, B and C.

- 2. If the school is part of a network of schools and/or would contract with a charter management....**

Innovative Schools will provide Charter Management Organization (CMO) services for the Delaware STEM Academy (DSA) through a contractual relationship. To support the successful launch of the school, Innovative Schools will hire a project manager who will work full-time on-site during Year 1 of the school's operation. The school leader, in collaboration with the CMO project manager, will be responsible for ensuring the academic program is implemented with fidelity to the New Tech Network (NTN) model, and for helping to establish a high-quality operations infrastructure (See attachment 8-A and C, respectively). The executive director will focus on the operational aspects of the school, allowing the school leader to dedicate all of his or her time to serving as the instructional leader, focused solely on the quality of the instruction, implementation of the educational program, and student achievement. The CMO project manager will dedicate his or her time to supporting the leadership team to establish all operational components of the school, provide oversight of the implementation of the school's academic program, and coordinate the Innovative Schools' team to properly support the start-up activities. During the course of their time at the school, the CMO project manager will help to build the systems to support the long-term success of the school, as well as transfer capacity and knowledge to the school leader and executive director, so that this position is no longer needed by Year 2 of the schools operations.

### **Staffing Plans, Management, and Evaluation** *[14 Del. C. § 512 (6)]*

- 1. Explain the relationship that will exist between the proposed charter school and its employees...**

Upon hire, all employees will sign an employment agreement. The purpose of the agreement is to outline the employee/employer relationship, identify the compensation and benefits offered to the employee, and detail the duties to be performed by the employee. New employee orientation will include an explanation of the school's core values, vision, and mission. In addition, each new employee will be given an overview of the benefits program and will complete all necessary paperwork prior to employment.

All employment at DSA will be "at will." This means that both employees and the school have the right to terminate employment at any time, with or without advance notice (though all parties may request and should try to give thirty days' notice); and, with or without cause. However, DSA will not discharge employees for exercising their political affiliation; for

answering the call for military service or jury duty; for exercising their right of association; for filing a worker's compensation claim; or for receiving an order for wage garnishment.

**2. Outline the proposed school's salary ranges and employment benefits for all employees....**

For an outline of proposed salary ranges and employment benefits for DSA staff, see Attachment 14-C. Salaries for the school leader and the executive director are based on comparable salaries for these positions at other Delaware charter schools. Teaching staff, counselor and nurse salaries are calculated at 90% of the Colonial School District's salary for comparable education levels and years of experience, as outlined in Attachment 14-C.

DSA will use Innovative Schools' human capital management support services to identify and retain high quality teachers, utilizing The New Teacher Project's (TNT) Instructional Culture Insight Survey component of their services; the school leader will seek evaluative feedback from the school's teachers twice per year. Teachers will be surveyed on a number of issues that reflect on the executive director and the school leader's performance; and inform of their intent to stay at or leave the school. This data will be collected at the middle and end of the school year and used by the executive director and school leader to improve his/her approach to leadership, and to help address issues that may prevent staff from being successful, or may lead to the highest quality staff seeking alternate employment opportunities. In a 2011 study conducted by the American Institutes for Research, the index score produced by the Insight Survey was found to be a valid predictor of teacher retention and student performance.

**3. Describe the plan and timeline for recruiting and selecting the teaching staff and other.....**

The CMO, along with its subcontractor, NTN, will assist the Board and the school leadership team (school leader and executive director) in recruiting and hiring the teachers and school support staff; as well as defining responsibilities, determining compensation for all school employees within the constraints of the school budget, and providing training in the NTN model and the STEM instructional design. While both the school leader and the executive director will participate collaboratively in the hiring of all positions, each administrator will be responsible for building out his or her respective teams. The school leader, with approval from the Board, will have the final authority to hire teachers and other instructional staff. The executive director, with approval from the Board, will have final authority to hire school support staff.

The CMO will aid the school's recruitment efforts by working with NTN to recruit teachers already trained in the NTN school design. Specifically, the CMO will conduct an aggressive recruitment campaign through local and national advertising for all open positions. Interested candidates will be screened and participate in a rigorous interview process based on TNT's work around recruitment and selection.

The process for hiring the school leader, teachers, and other school staff will include: recruitment and screening; review of credentials, background, experience, and references; sample lesson (if applicable); writing sample; interviews with the school leader and/or Board; sample lessons; and recommendations and contract approvals by the Board. The tasks and timeline for hiring may be found in Appendix D-1.

If non-certified teachers are hired on emergency certification, it will be necessary for them to successfully pass the PRAXIS I and II and to possess a nationally accredited degree in their core area of instruction. Alternatively, uncertified teachers may participate in a Delaware-approved alternative route to certification program to earn their teaching certificate. DSA will not exceed the state maximum for uncertified teachers. All teachers will be required to maintain compliance with state and Federal certification guidelines.

**4. Outline the school's procedures for hiring and dismissing school personnel, including the school...**

The process for hiring the school leader, teachers, and other school staff will include: recruitment and screening; review of credentials, background, experience, and references; sample lesson (if applicable); writing sample; interviews with the school leader and/or Board; sample lessons; and recommendations and contract approvals by the Board. The tasks and timeline for hiring may be found in Appendix D-1. As part of the pre-employment process, all employees and CMO staff will be required to complete a criminal background check (CBC) through the Delaware State Police.

In cases where termination is necessary to ensure a safe and/or productive learning environment for the students, the following will guide the termination process: 1) in collaboration, the school leader and executive director will make the recommendation to the Board for termination of an employee; 2) the employee may appeal this decision to the Board by initially informing the Board Chair of the intent to appeal in writing; 3) the employee will meet with the Board, school leader and executive director; a final decision will be rendered by the Board; and 4) employees may also be dismissed through the DPAS II process explained below. The complete procedures for hiring and dismissal may be found in the Employee Handbook which is included as Appendix D-2.

**5. Describe how the school leadership will use the Delaware Performance Appraisal System (DPAS)...**

DSA's school leader will complete the online DPAS II Evaluator Training, accessible via the Professional Development Management System (PDMS) during the school's planning year, as required for all new administrators in Delaware public schools. The school leader will also attend the recommended three-day, in-person DPAS II Training for New Administrators, offered in the fall of the planning year. DSA teachers who need to will complete the online DPAS II Teacher Training or DPAS II Specialist Training blackboard course available through PDMS prior to their first evaluations.

The school leader will ensure that all observations and related materials are entered into Evaluation Reporting System (ERS) as required by the state. To ensure fidelity to the DPAS II evaluation system the Board and CMO will monitor the progress of the school leader toward teacher evaluation timelines. The Board and/or CMO will request feedback from the state to ensure that reports are accurate and complete. Periodically, the Board and/or CMO will request that external "experts" in the DPAS II evaluation system to review or audit the evaluation reports and provide feedback on their accuracy and thoroughness.

The DPAS II process will provide the backbone for feedback on teacher practice and related responsibilities in the building. Teachers who have summative ratings of 'Effective' or 'Highly Effective' may be considered for advancements, promotions, and extra responsibilities within the building. Teachers who have summative ratings of 'Needs Improvement' or 'Ineffective' will be provided with written expectations and/or improvement plans targeted at enhancing their performance. Ultimately, teachers who do not improve and continue to exhibit patterns of ineffective teaching may be subject to dismissal.

**6. Explain how the school will handle unsatisfactory leadership or educator performance....**

Employees with unacceptable job performance will be notified of the need for improved performance in written and verbal communication, and will be provided with any needed professional development and support to make improvements. In the most extreme cases (e.g., employee actions or words that harm or threaten to endanger students' well-being and behavior that creates an irrevocable breach of trust), employees may be terminated immediately. Should a teaching vacancy arise in the middle of the year, it will be filled using Innovative Schools' recruitment and selection support.

If the executive director or school leader does not meet performance expectations, he or she will be notified of the need for improved performance in written and verbal communication by the Board President. The Board President, in conjunction with the CMO, will meet with the executive director or school leader to create an improvement plan, and to develop a coaching schedule with a leadership coach for the school, available through Innovative Schools' staffing services. If the improvement in leadership capacity is not realized within the developed timeframe, the Board President, in collaboration with the CMO, will make the decision to terminate the executive director or school leader. Employment decisions related to the school leader and the executive director are at the sole discretion of the Board. In the most extreme cases described above, where students may be put in harm's way by the continuation of the executive director's or school leader's employment; he or she will be terminated immediately. In the event that the executive director or school leader is terminated, the CMO will support the Board President and Personnel Committee to begin recruiting and interviewing for a replacement executive director or school leader.

**Professional Development [14 Del. C. § 512 (6)]**

**1. Describe the professional development plan, including standards and opportunities.....**

Professional development for the executive director, school leader and teachers will be critical to ensure that they are able to implement the NTN model with fidelity. Professional development activities will be planned by the school leader, in collaboration with the CMO based on the NTN's recommended practices. Each year the topics for professional development will be determined based on the needs of the teachers, and data collected from annual evaluations conducted by the CMO measuring the school's fidelity to the NTN model.

In Years 1 and 2 of operations, most of the professional development will be delivered by the NTN instructional coach and the school leader. Over time, however, as the staff develops a deeper knowledge of the NTN model and STEM design principles and demonstrates

competency with the instructional elements, staff members – including both faculty and administration – will work with the NTN coach to facilitate and lead some of these sessions. This will allow the school to smoothly transition to a maintenance contract with NTN, ensuring sustainability of the school model. To facilitate professional learning at DSA, consistent monitoring structures will be put into place and tracked by the CMO to facilitate the professional growth of the teachers and the school leader.

**a. A schedule and explanation of professional development that will take place prior to school...**

The focus of professional development during the planning year will be to train the executive director and school leader in the NTN learning design, and to build his/her capacity to open the school with a strong culture, academic program, and administrative infrastructure. During Year 1, the goal will be to empower teachers to build the school culture with students, and to implement a strong academic program that delivers on the promise of superior learning. Because NTN is a unique instructional model, teachers will receive specialized NTN professional development including a visit to a model NTN school, attendance at the NTN New Schools Conference, and participation in professional development conducted by the NTN coach. A schedule of professional development activities for the executive director, school leader, and teachers may be found in Appendix D-3.

**b. The expected number of days/hours for professional development throughout the school ....**

To facilitate professional learning at DSA, consistent structures will be put into place, and monitored by the CMO and NTN, to facilitate the professional growth of the teachers, the executive director and school leader. These structures may be found in Appendix D-3.

The school calendars for the 2015-2016 school year, included in Attachment 6-A, shows the professional development days and an annual retreat. Teachers will spend 8 days prior to the school opening engaged in planning and project development. Throughout the school year, teachers will have an additional 7 days of professional development to engage in professional development with the NTN coach to refine their skills delivering project-based, technology-infused instruction. The sample teacher schedules (Attachment 6-B-1, 2, 3 and 4) shows when grade-level teachers will have time for their weekly 90 minutes PLC meetings.

A comprehensive professional learning program for the executive director and school leader will be developed in partnership with NTN and will include: 1) Leadership Residency: to learn the core components of the model, how to lead the development of culture, and how to develop a plan for creating a NTN; 2) Spring Leadership Summit: to provide networking opportunities and PD for NTN leaders; and, 3) Coaching: to provide individualized sessions for each school administrator several times a year. These sessions are focused on school culture, supervision of instruction, coaching of advisors and classified staff, generation and interpretation of data, and strategies for enhancing community involvement.

**c. An explanation of how professional development will be aligned with the interim....**

Professional development will be aligned to Delaware Standards, Common Core State Standards, Next Generation Science Standards and DSA goals, with progress toward meeting

these goals benchmarked with interim assessments. Teachers will be supported in using the data from interim assessments with professional development from the school leader. The NTN instructional coach will meet with teachers regularly to lead discussions about using data to develop future projects, learning opportunities, and assessment rubrics. As teachers work with the NTN coach to examine the data, they will determine progress toward meeting goals and benchmarks, and use this information to differentiate upcoming projects.

Specifically, the NTN coach will work with teachers to ensure that interim assessments such as common grade-level assessments and projects will show what students know and are able to do, examining a student's level of proficiency in meeting set targets. Rubrics will measure each student's performance on these assessments and identify specific areas of needs. Staff will collaborate during PLCs with their school leader and/or New Tech Coach to analyze data and identify common areas of need or strength. Together, staff will develop goals, evaluate instructional strategies and structures, modify practices, discuss student work and expectations, and determine what additional supports may be needed based on these patterns.

Through DPAS II it is expected that all staff members will demonstrate the capacity to move their students toward meeting learning targets developed by DSA. The DPAS II process will help teachers identify areas for professional growth, and opportunities to enhance their skills and knowledge will be provided. Structures and practices for supporting staff learning will include: self-assessment and reflection; coaching and modeling of best practices; working collaboratively with colleagues to improve curriculum, assessment, instruction, and classroom practices; conducting action research; developing and piloting new instructional techniques and structures; analyzing student and school data to shape the school program, classroom instruction, and student outcomes; and discovering new learning opportunities.

**d. An explanation of how the professional development program will be evaluated to assess....** Effective evaluation of professional development requires five levels of inquiry. School leaders must consider participants' reaction to the training, participants' learning of the content, organizational support and learning, participants' application of knowledge in the classroom, and, finally, improved student outcomes (Guskey, 1999). An explanation of the five levels of inquiry may be found in Appendix D-4.

Prior to each professional development session, the school leader will collaborate with the NTN coach, the executive director, and CMO project manager to identify the desired outcomes for the professional development session, establish a driving question, and determine an appropriate method of evaluation. The school leader will seek to include teacher leaders when making decisions about professional development, including sharing the planning framework with each team and having them create outcome and evaluation measures for the focus of that team's professional development. Each year an audit will be conducted by the NTN which will evaluate the school's fidelity to the NTN model and suggest next steps that will be used in planning the following year's professional development calendar. This evaluation will provide information to the school on the effectiveness of the professional development and the capacity of the staff to implement the professional development.

## 1.6 Governance and Management

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*14 Del. C. §§ 512 (1), (2), (6) and (9)*

### Charter Management Company

#### Legal Status and Governing Documents [14 Del. C. § 512 (2)]

1. **Identify the name of the organizing corporation, date of incorporation, and names of the corporation's officers and the office held by each.**

|                        |                             |
|------------------------|-----------------------------|
| Corporation Name:      | Delaware STEM Academy, Inc. |
| Date of Incorporation: | July 26, 2013               |
| President:             | Ted Williams, P.E.          |
| Vice President:        | Carolann Wicks, P.E.        |
| Treasurer:             | June Griffiths-Stepp        |
| Secretary:             | Judy McKinney-Cherry        |

2. **Attach a copy of the Articles of Incorporation, a copy of the Board bylaws, and board policies of the corporation as Attachment 9.**

Included as Attachment 9-A & B, respectively, are the Articles of Incorporation and the Board Bylaws. The Board has voted to approve this charter application and all of the policies and procedures described herein, and in the attachments and appendices. After approval of the charter, these policies and procedures will be included in a Board Policy Handbook, which will be consistent with the approved charter. During the planning year, the Board will vote to approve each policy contained within the Handbook. Any additional policies, as needed, will be developed by the Board, in collaboration with the CMO, the executive director, and the school leader, to ensure the smooth and successful operations and academic programming of the Delaware STEM Academy (DSA).

3. **Provide, as Attachment 10, the completed and signed Statement of Assurances.**

The signed Statement of Assurances is included as Attachment 10.

#### Governing Board [14 Del. C. §§ 512 (1), (2), (6) and (9)]

1. **Governance Philosophy. Explain the general philosophy of governance that will guide the proposed school, including the nature and extent of involvement by key stakeholder groups.**

Following approval of the school's charter, the Founding Board of DSA will transition to a Governing Board and will be responsible for the oversight and governance of the school, its operations, and its administration. The overarching philosophy of governance that will guide the proposed school is to operate in an open and transparent way to ensure that parents, teachers, and stakeholders have a clear understanding of DSA's financial health, academic

standing, and organizational compliance and have regular access to all governance functions, as prescribed by law.

Key stakeholder groups may participate at the school by serving as members of the Governing Board, the Technical Advisory Group (TAG), or the Citizen's Budget Oversight Committee (CBOC). As a subcommittee of the Board, TAG will report to the board and will include board member liaisons. Further discussion of these bodies may be found in the Advisory Groups section in question 7 below. DSA's executive director and school leader will also convene and maintain a Parent Advisory Committee for the purpose of advising them in the operations of the school, as they pertain to students and families.

## **2. Structure and Composition.**

- a. The school will be an educational and operational success.

A list of current board members, their intended roles, and the constituencies they represent may be found in Attachment 1-D. The board resumes, professional biographies and the Charter Board Information Forms collectively provide evidence the founding group is committed to govern the school effectively, and will ensure the achievement of the school's mission and goals. These supportive documents may be found in Attachments 1-B & C; and Attachment Section 11, respectively.

The general governance structure, board size and composition may be found the By-Laws (Attachment 9-B). Following approval of DSA, the Founding Board will be reconstituted into a Governing Board. The Governing Board will be responsible for oversight and governance of the school, its operations, and its administration to ensure the school is meeting its obligations outlined in its charter and in its Performance Agreement with the Delaware Department of Education. More specific information about responsibilities of the Board may be found in Appendix E-1.

The DSA Board will directly oversee the Charter Management Organization (CMO) as part of its reporting structure. The CMO will be accountable for the business, operational, and academic services of the school.

The CMO, school leader, and executive director will report directly to the DSA Board at monthly meetings on the school's financial health; academic standing; operational functions; parent and community involvement; and, any other topics relative to the school's success measures outlined in the school's charter and Performance Agreement. The DSA Board will be responsible for evaluating the performance of the school leader, executive director, and the CMO, and will hold these individuals accountable for the school's success.

- b. There will be active and effective representation of key stakeholders.**

To ensure adequate representation as a Governing Board once the charter is approved, the Board President will evaluate the Board's membership against a matrix that is consistent with Delaware Charter School Law and develop a recruitment plan to fill newly created board



vacancies or gaps in areas requiring specific expertise consistent with Delaware regulations for a charter school board.

The Board currently includes one prospective parent and one Delaware Certified teacher. These two board members will stay on the board through the planning year. Closer to the school's opening date, the Board will hold elections to fill the roles of a parent of a student attending the school and a DSA teacher to ensure compliance with Delaware charter school requirements.

### **3. Roles.**

A list of current board members, their roles, the constituencies they represent, and their interests in and qualifications for serving on the school's board may be found in Attachment 1-D. Board resumes, professional biographies, and the Charter Board Information Forms collectively provide evidence that the Founding Board is committed to governing the school effectively, and will ensure the achievement of the school's mission and goals. These supportive documents may be found in Attachments 1-B & C, and Attachment Section 11, respectively.

Below is a list of the board members along with their area of expertise.

- 1. Ted Williams, P.E. President, Landmark Science and Engineering**  
(Community Member; Fundraising; Organizational Management; Facilities; Real Estate, Project Management; STEM Expertise)
- 2. Carolann Wicks, P.E., Partner, Rummel, Klepper and Kahl**  
(Community Member; Fundraising; Organizational Management; Facilities, Real Estate, Project Management, STEM Content)
- 3. June Griffith-Stepp, Manager of Business Development, Bancroft Construction**  
(Community Member; Diverse Populations; At-Risk Learners; Program Development and Strategic Planning; STEM Expertise)
- 4. Judy McKinney-Cherry, President, New Growth Strategies**  
(Community Member; Diverse Populations; At-Risk Learners; Parent/Community Engagement; Investment/Banking; Marketing; Project Management)
- 5. Stephanie McClellan, Ph.D., University of Delaware**  
(Organizational Management; Strategic Planning; Communications; Government Affairs; Project Management; STEM Content; Policy and Advocacy)
- 6. Brian McGlinchey, Laborers-Employers Cooperative and Education Trust**  
(Community Member; Fundraising; Investment/Banking; Strategic Planning; Project Management; STEM Content)
- 7. Tim Frey, Esq., Saul Ewing, LLP**  
(Community Member; Charter School Law; Strategic Planning; Project Management)
- 8. Marian Young, P.E., President, Brightfields Environmental, Inc.**  
(Community Member; Organizational Management; Facilities; Project Management; STEM Content)
- 9. Charlie Driggs, Manager, Strategic Initiatives, PEPCO Holdings**

(Community Member; Parent/Community Engagement; Facilities; Strategic Planning; STEM Content)

**10. Andy Ragone, Ph.D., Scientist, DuPont Company**

(Fundraising; Financial Management; Facilities; Strategic Planning; Project Management; STEM Content)

**11. Richard Mulski, Department Chair, Delaware Technical Community College (DTCC)**

(School Leadership and Administration; Business Management in DE Schools; Personnel Management; Parent/Community Engagement; Fundraising/Program Development)

**12. Laura Jennice, Board Member, DE Certified Teacher,**

(School Development; Governance; DE Certified Teacher; Parent& Community Engagement, New Tech)

The Governing Board will maintain five standing committees: Executive, Academic Programming, Personnel, Marketing and Student Recruitment, and Finance and Facilities. The TAG will serve as a resource for all five committees. There will be an independent CBOC. All committees will be comprised of board members and additional members from the school community. All committees will report out at the monthly board meetings.

DSA will contract with Innovative Schools to manage the business and academic services of the school during the planning year and the school's first four years of operation. It is understood by both parties that at all times, Innovative Schools remain accountable and subject to the oversight of the Board, the Authorizer, and State authorities.

The school leader, executive director and CMO will report directly to the Governing Board at monthly board meetings on the school's financial health, academic standing, organizational compliance, parent and community involvement, and any other topics relative to the school's success measures outlined in the school's charter and Performance Agreement. The Board will be responsible for evaluating the performance of the school leader, executive director, and CMO, and will hold these individuals accountable for the school's success. The Board will have the power to terminate the school leader, executive director, and CMO if the school is not meeting its obligations.

**4. As Attachment 11, provide a completed and signed Charter School Board Member Information Form for each proposed Board member.**

Included as Attachment 11 are signed Charter Board Member Information Forms for each board member.

**5. Procedures.**

Board members have been selected and recruited for their professional experiences and skills related to the development, governance, and management of DSA. Their passion for and ongoing commitment to the mission and vision of the school will ensure a superior educational opportunity for all students attending the school.

Recruitment for the Board and CBOC will occur through a number of different venues including, but not limited to, Innovative Schools' ongoing Board recruiting efforts, solicitations for nominations of DSA's employees and of parents of students to be enrolled at the school, as well as requests to key members of the Delaware Business Roundtable and other businesses, and community organizations throughout New Castle County. Nominations will be collected by the Board's designated nominating committee and the results of the school Board elections will be shared at a public Board meeting.

On a more permanent basis, nomination and election protocols for open positions on the Board and Committees will be posted on DSA website (to be developed following charter approval) and, as openings arise, communications will be sent directly to all school stakeholders to ensure a fair, open, and transparent recruitment and election process. As new Board and Committee members are brought on, they will be expected to participate in workshops hosted by NTN to ensure all members have adequate knowledge and understanding of the academic program, as well as Board Development trainings targeting roles and strategies that support effective governance.

The Board will have the following five standing committees as defined in Article IV of their bylaws: Executive, Academic Programming, Personnel, Marketing and Student Recruitment and Finance and Facilities. The CMO, school leader, and executive director, with input from these committees, will perform the necessary work to open the school in the fall of 2015. The Board will establish a CBOC in the summer of 2015.

After approval of the charter application, the Board will hold open monthly meetings to review and discuss reports on school operations, finances, and academic performance. The school leader will report at these monthly meetings on student performance in areas such as attendance, academic achievement, progress toward graduation, and family engagement.

Monthly financial reports will be presented to the Board and to the CBOC by the executive director. A schedule of Board meetings will be posted on the school's website at least seven days before the meeting so that members of the community may attend, and 20 minutes per meeting will be reserved for public comment. Board meeting minutes will be posted on the school's website and shared with staff and parents. The Board will maintain compliance with the Freedom of Information Act (FOIA) and public bodies, public records, and open meeting laws.

#### **6. Board Improvement.**

The board intends to fully comply with all required training for board members, as defined in statutory and regulatory requirements. In addition, and to ensure adequate evaluation of itself and the school, Board members will also participate in Innovative Schools Board Development workshops. These training sessions will build capacity within the Board in the areas of superior school governance; oversight; accountability for all financial, legal, and academic matters; and, best practices for school leadership and operations.

The Board will follow best practices for new member orientation to ensure consistency in the governing structure. Board members will also participate in DDOE Board trainings, including school finance and performance management training. Innovative Schools offers the Board Development Workshop Series each year, and new board members will be asked to attend all sessions as well as DDOE Board trainings. Over time, the Board will continuously evaluate the success of plans and processes for recruiting Board and CBOC members and make adjustments as necessary.

Innovative Schools will work regularly with the Board, using both formal and informal evaluative measures to ensure the school is staying 'on target' in all aspects of its Performance Agreement. Annually, a 'Gap Analysis' will be conducted to ensure the school is maintaining fidelity to its mission and goals. Through this process, Innovative Schools will work with the board and staff to review the approved Charter Performance Agreement and the school's actual data to identify gaps in performance. Working with the board, Innovative Schools will conduct a formal review of goals for student performance, inclusive of all data relative to the goals and achievement targets. In accordance with the Charter Performance Agreement, an Annual Report shall be provided to the Delaware Department of Education (DDOE).

#### **7. Board Continuity.**

Following the approval of the school's charter, the Board's President will evaluate its membership against the Board Qualification Matrix (see Attachment 1-A) and develop a recruitment plan for newly created board vacancies to fill gaps in areas requiring specific expertise to ensure they are meeting Delaware requirements for charter school board membership, and to implement the school's education program. The recruitment and on-boarding will occur throughout the planning year, and continue through the years of school operations. For additional detail on board member recruitment, see question 5.

#### **8. Ethics and Conflicts of Interest.**

Pending the approval of the school's charter, the Board will adopt a formal policy on board ethics and conflicts of interest. A draft policy has been developed, modeled upon local Delaware district policies. The sample draft policy can be found in Appendix E-2, which will undergo a more thorough review and approval process following the authorization of the school's charter.

The Board will be required to disclose all financial interests they have in any service provided to the school. An initial screening process is used as part of this charter application and may be found in the Charter School Board Member Information Form-Disclosures in Attachment 11. For future board members, the Board will make use of the same Conflict of Interest Disclosure form as part of the on-boarding process when adding new members.

#### **Advisory Bodies [14 Del. C. §§ 512 (1), (2) and (6)]**

- 1. Describe any advisory bodies or councils to be formed, including the roles and duties of these bodies. Describe the planned composition of the advisory body; the strategy for achieving that**

**composition; the role of parents, students, and educators (if applicable); and the reporting structure as it relates to the school's governing body and leadership.**

In addition to the advisory committees described in the Bylaws, the executive director will establish a CBOC and the school leader will establish the Parent's Advisory Committee.

The CBOC will be established in accordance with State law. This Committee will have at least five members including one educator from DSA, one Board member, at least two parents or community members who are not school employees or Board members, and representation from the DDOE.

Twice annually, the Board, the executive director, school leader, CMO and CBOC will meet to review the school's progress. The Board and CBOC will have staggered terms of service to ensure smooth transitions and stability of knowledge and expertise with board roles and responsibilities.

The Parent's Advisory Committee will be established by the school leader to ensure that the voices of parents are part of school's decision-making process. The school leader and Committee chairperson will recruit parents so that the committee is reflective of the demographic of the student body. This group will meet at least quarterly to assist and advise the school leader. This group will also coordinate volunteer opportunities for parents to ensure that there are ample opportunities for parents to fulfill their volunteer hours. This group will not take the place of a Parent-Teacher-Organization, but will exist in addition to that body.

Finally, DSA formed a Technical Advisory Group (TAG) comprised of various stakeholders from industry, the local community, and the education field. The purpose of this group is to provide opportunities for students to participate in projects relevant to the curriculum as well as mentorship opportunities in various fields. The TAG volunteers work in engineering, science, energy and environmental corporations, many of which are interested in furthering STEM education and encouraging students to pursue careers in STEM-related fields. The TAG also has volunteers with various educational backgrounds, such as student recruitment, curriculum development, education finance, human resources and student counseling, to advise the DSA board on the various aspects of operating the school. The TAG is a volunteer-based group, and the executive director serves as the advisor to the TAG. The TAG often participates in joint meetings with the Board of Directors in order to ensure that there is regular communication on curriculum issues and state-of-the industry implications for the school.

#### **Grievance Process [14 Del. C. § 512 (9)]**

- 1. Explain the process that the school will follow should a parent or student have an objection to a governing board policy or decision, administrative procedure, or practice at the school.**

Accountability for the school's success rests on strategic decisions made by the Board, and on the execution of academic and operational programs by Innovative Schools, the school leader,

executive director, and the school's staff. Parent representation on the Board, CBOC, and the Parent's Advisory Committee will be a primary means of assuring that DSA families have influence and a path of recourse on matters of importance or concern. Parent representatives will be selected from at-large nominations from the students, parents, and stakeholders for the Board and other committees

In the event a parent and/or student has an objection to a Board policy, administrative procedure, or practice at the school, a written communication will be required defining the concern, along with a description of the circumstances surrounding the concern, and the impacts of the identified policy, procedure, or practice. Twenty minutes of each monthly board meeting will also be reserved for public comment to allow an opportunity for grievances to be discussed publicly. Concerns about a Board policy will be directed to the Board President; concerns about administrative procedures or practices will be directed to the Board President, executive director, and the school leader.

Consideration of the concern by the Board President, executive director, and/or school leader will involve, but not be limited to, careful review and investigation of the complaint; discussion among members of the leadership team; communication with the originator of the grievance to seek more information or clarity, as needed; and a decision rendered to the complainant, which will be communicated in writing. The grievance may or may not result in a change of policy, procedure, or practice by the Board.

The grievance process will be communicated to parents through the Parent's Advisory Committee, Parent Teacher Organization, the Parent/Student Handbook and the school's website. The Board President will develop a mechanism for tracking grievances to ensure a decision is rendered to the complainant in a timely fashion.

## 1.7 Parent and Community Involvement

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*14 Del. C. §§ 512 (1) and (6)*

### Parent Involvement

**1. Describe the role of any parents and community members involved in developing the proposed school.**

Preparation of the charter application and development of the Delaware STEM Academy (DSA) academic program has involved three key groups: (1) Delaware teachers, parents, and community members who comprise the school's Founding Board; (2) the Technical Advisory Group (TAG); and, (3) Innovative Schools, a Delaware non-profit public school support organization. The Founding Board hired Innovative Schools to help research and select a high quality instructional design to complement their vision of a STEM school, and then to coordinate the development and preparation of the charter application.

The Board selected the New Tech Network (NTN) instructional design from Innovative Schools' portfolio of school models, identifying many areas of alignment between the intended STEM focus for the academic program and the New Tech Network academic program.

The Founding Board, along with the TAG, has been working together since 2012, and remains passionate and committed to the successful launch of DSA in Wilmington/New Castle County. They have worked hard to bring together key stakeholders from the STEM industry with an interest in opening a STEM high school. The Board is continuing to build capacity to ensure that it is representative of experts in school operations, academic programming, the STEM professions, community representatives, and parents. A diverse group will be required to drive forward DSA's focus on STEM and unique NTN instructional design.

**2. How will you inform parents and the community about the school's development?**

The Founding Board has begun the process of engaging and informing communities in New Castle County about the development of DSA. Outreach activities have included hosting public information sessions, conducting a social media campaign, seeking feedback on the school's design and potential demand through an electronic survey, and gathering letters of support from New Castle County businesses and community-based organizations. Individuals who participated in these outreach activities and signed up for the DSA mailing list will continue to receive e-updates on the school's progress over the next several months. The board will continue to post updates through electronic tools that were set up during the application process including a school website ([www.destemacademy.org](http://www.destemacademy.org)) and the school's Facebook, Twitter, and LinkedIn pages. The Founding Board also intends to continue hosting community meetings over the next several months to solicit additional feedback and support. The school anticipates that a higher volume of parents and community members will attend information

sessions post charter application approval to learn more specifics about the school and how to enroll.

For additional detail on community outreach and the results of the feasibility study see Appendix A -1. For the school's planned outreach strategies post charter approval, see the Marketing Plan -Appendix B-14.

- 3. Describe how you will engage parents in the life of the school, in addition to any proposed governance roles described above. How will the school build family-school partnerships to strengthen support for learning and encourage parental involvement? Describe any commitments or volunteer activities that the school will offer to parents.**

Parents will be involved in leadership and decision-making within the school. A minimum of one parent of a student enrolled in DSA will hold a position on the Board, as well as a Delaware certified teacher employed at the school. All Board meetings are open to the public, including DSA parents and community members with 20 minutes of each board meeting set aside for public comment. Parents will also be represented and have leadership roles through the schools' Citizens Budget Oversight Committee (CBOC), Technical Advisory Group (TAG), Parent's Advisory Committee (PAC), and other committees that are formed by the Board to plan and execute special projects. To manage these functions, the PAC will serve as a critical resource in the school for identifying needs, corraling resources, organizing and running events, and serving as primary ambassadors to promote the school.

Parent surveys will be a tool used on an annual basis to gauge parent satisfaction with many aspects of student learning and school operations. Parent feedback will be sought following student exhibitions and other school events. Data on family and parental engagement will be collected by the executive director, school leader, and CMO and will be reported to the Board as one measure of the school's success. The Board will use this data to ensure that DSA is meeting the needs of parents and families.

### **Community Involvement**

- 1. What community resources will be available to students and parents? Describe any partnerships the school will have with community organizations, businesses, or other educational institutions. Specify the nature, purposes, terms, and scope of services of any such partnerships.**

The core partnerships for DSA will be with NTN and local scientific and engineering firms who will support the academic program and STEM career pathway courses. Following the charter's approval, the executive director and school leader will continue outreach to develop partnerships within the STEM industry and with STEM support groups such as the Delaware STEM Council. Through these partnerships, students will have access to internships and community service projects that could include businesses, community organizations and/or other educational institutions. Teachers will be able to access the school database of community partnerships for project ideas, field studies, and project presentation panels.



Through its CMO contract arrangement with Innovative Schools, DSA will join a growing network of deeper learning schools in Delaware called the Alliance of Model Schools (Appendix F-1). There are currently 11 schools in this network, including the other two NTN high schools in Delaware. The Alliance is a free network for all Innovative Schools' deeper learning partner schools. Developed out of a pressing need from deeper learning schools in Delaware, the Alliance facilitates unique partnerships between deeper learning schools and the world around them. These partnerships include state and local leaders, business leaders, community partners, and volunteers from throughout the state of Delaware who support this vision. As of the Fall of 2013, the Alliance has developed meaningful relationships with over 90 leaders throughout the state. Keeping with this trajectory and pace, by the Fall of 2016, The Alliance will have over 200 business, community, civic and religious leaders as partners in this work. As a member of the Alliance, DSA will have access to all of the Alliance's partners, its free programming and professional development. Students at DSA will have the opportunity to work with other students attending New Tech schools in the state at Delaware New Tech Academy at Seaford and in New Tech schools across the country.

Letters of support from community partners and individuals, along with community engagement responses may be found in Attachment 12. The Board plans to continue its community outreach and engagement and anticipates providing additional evidence of community support at the initial interview with the Charter School Accountability Committee.

**2. Describe any fee-based or in-kind commitments from community organizations or individuals that would enrich student-learning opportunities.**

The Board is engaged in fundraising to support the application development and approval process and will continue to fundraise through the spring of 2014 to fund a school leader and planning year activities. The full fundraising plan is included as Appendix F-2.

**3. Provide, as Attachment 12, evidence of support from community partners, which may include letters of intent/commitment, memoranda of understanding, and/or contracts, and should specify the resources to be committed or contributed from the partner, as applicable.**

See letters of support in Attachment 12 from community partners.

## 1.8 Start-up and Operations

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*14 Del. C. §§ 512 (1), (8), (9), (10), (12) and (13)*

### 1. Start-Up Plan.

The Start-Up Plan for the Delaware STEM Academy (DSA) - Attachment 13 – identifies the specific tasks, timelines and individuals responsible for the start-up operations of the school. Accompanying budget information is provided in Attachment Section 14.

### 2. Transportation

DSA will contract bus transportation services to get students to and from school. Such services will be secured using a highly reputable and insured firm that specializes in the student transportation business. Based on the enrollment reported each April to the DDOE, the executive director will open the bus routes to a public bidding process. Bus routes will be established for those students who live within the district in which DSA is located.

DSA will make every effort to accommodate transportation to and from the school beyond any single school district by establishing central hub points outside of the district for student pick-up and drop-off. The executive director, CMO, and CMO project manager (starting in 2015-16) will work diligently with the transportation company planners to identify and establish convenient spoke and hub configurations that maximize student access and minimize ride times to provide the most efficient and cost-effective means of getting students to and from the school campus location.

Appropriate accommodations, as defined in the students' Individual Education Plans (IEP), will be provided to meet the needs of all special needs students requiring transportation. As special transportation needs are identified, the school will work with the students' parents and the transportation services company to ensure compliance with specialized transportation needs.

As field trips and other such events are planned, arrangements will be made through the school's contracted transportation services provider. Transportation costs for athletic programs and other such activities will be funded through booster clubs.

**Describe the plan for oversight of transportation operations (e.g., whether the school will provide its own transportation; contract out for transportation; or request that a district provide transportation; or a combination thereof).**

The school leader will maintain responsibility for oversight of transportation operations and the executive director will support the school leader. The school leader will ensure appropriate supervision of students before and after school, oversee bus routing and transportation operations, and will schedule and supervise bus safety drills. The school leader will also put into place a transportation contingency plan to address transportation emergencies. This plan

will be created in concert with the procedures put in place by the busing company. All bus drivers will be trained in the contingency plan and will have a list of contact names and phone numbers at the school, beginning with the school leader, followed by the executive director, and then down the chain of command that has been established.. Once informed of the emergency, in most cases, the school leader will go to the site to coordinate support with other emergency responders and ensure the safety of the students. The executive director and CMO project manager would typically stay at the school to maintain the routine of the school day and to begin the process of notifying parents of the students involved in the situation. In the event of a catastrophic incident, additional staff members from DSA as well as Innovative Schools may be called into service at either the school or at the emergency site to assist in securing the safety of all students.

### **3. Safety and Security.**

The school leader, in consultation with the executive director, will establish a School Safety Committee to serve as a clearing house for the discussion of issues, policies and practices related to the safety of students, parents and staff. Committee representation will include, but may not be limited to, the school leadership team, teachers, the school nurse, the custodian, and a parent.

#### **Building Access**

In the interest of safety for students, staff, and visitors, “controlled access” to the school facility will be maintained at all times. A security system will provide visual live feeds of all building entrance locations, as well as other key spaces inside and outside the building. All outside doors will remain locked from the outside, except during student arrival and dismissal times. Visitor access will be restricted to the main entrance – all guests must present proper identification and comply with all ‘guest pass’ procedures before being allowed to pass beyond the main entrance. All students and staff will be required to wear photo ID badges while on school premises. Guest sign-in procedures will be established.

#### **Healthcare**

Assuring a safe and healthy environment for students and staff will be of the highest importance. DSA will hire a registered nurse who will be responsible for operating under the *Nursing Technical Assistance Manual* issued by the Delaware Department of Education (DDOE).

DSA will implement a comprehensive set of health, safety, and risk management policies and practices, in accordance with the *Nursing Technical Assistance Manual*. In addition, these policies and practices will be communicated to parents, students and staff as part of enrollment procedures and various orientation programs.

The school will maintain diligence in communications to parents, staff and students about urgent health issues, and will make every effort to employ best practices in managing the health and safety of students, staff and guests.

The school leader will assemble a safety committee composed of stakeholders that meet quarterly and conduct a yearly audit. The school leader will maintain responsibility for oversight and management of health and safety policies and practices.

**Phone/Texting Notification System**

DSA will use an automated school notification system or similar to improve communications between the school and home and to provide important safety notifications to parents and guardians. This system for communication will provide notifications about school closings, delays, early dismissals, emergency notifications, attendance calls, bus route notifications, lockdown communications, activity reminders, lunch balance reminders, and parent polls and surveys.

**Background Checks**

As part of the pre-employment process, all employees and CMO-related staff will be required to complete a criminal background check (CBC). In addition, the Child Abuse Registry (CAR) will be checked through Department of Services for Children, Youth and Families (DSCYF). The school leader, with support from the executive director, will maintain due diligence in following the regulations for CBC's and CAR's for volunteers. Results will be maintained in a secure file, separate from personnel files; and, available for authorized inspection.

The School leader, with support from the executive director, will be directly responsible for ensuring that criminal background and child abuse registry checks are initiated, completed and appropriately documented prior to an individual staff member's employment or board member's appointment.

**Comprehensive School Safety Plan (CSSP)**

In accordance with the Omnibus School Safety Act, the School Safety Committee will work with the Department of Safety and Homeland Security (DSHS) to develop and maintain a comprehensive site-specific safety and emergency preparedness plan that is in compliance with the national Incident management System (NIMS). Following the approval of the school's charter, the School leadership team will reach out to DSHS to begin the Plan's development.

**4. Lunch/Breakfast.**

DSA intends to participate in the National School Breakfast/Lunch Program, and will contract for meals from a qualified food service vendor. Meals will be served on-site five days each week to all students.

Meals will be provided to all students, including those eligible for free/reduced meals and students who are homeless. Eligibility for free/reduced meals will be determined annually during the first week of school and in accordance with established state and federal procedures. The school leader, executive director, and CMO will work with the food service

vendor to ensure that all meals are consistent with state and federal guidelines and compliant with USDA regulations.

#### 5. **Student Health Services.**

Assuring a safe and healthy environment for students and staff will be of the highest importance. DSA will hire a registered nurse who will be responsible for operating under the *Nursing Technical Assistance Manual* issued by the Delaware Department of Education (DDOE).

DSA will implement a comprehensive set of health, safety, and risk management policies and practices, in accordance with the *Nursing Technical Assistance Manual*. These policies and practices will be communicated to parents, students, and staff as part of enrollment procedures and various orientation programs.

The school will maintain diligence in communicating with parents, staff and students about urgent health issues, and will make every effort to employ best practices in managing the health and safety of students, staff and guests.

The school leader will supervise the nurse, evaluating both in job performance and also his/her role with ensuring compliance with health regulations.

#### **Student Enrollment**

Policies will be developed and approved by the Board prior to student recruitment beginning in the Fall of 2015, and at a minimum will address the following topics:

- **Ensuring that students have physical examinations and immunizations prior to enrollment;**  
Proof of a student's recent physical examination and immunizations will be collected at the time of enrollment. In accordance with state regulations, parents will be notified when immunization and other screening requirements are not met, and the student will be excluded from school until the regulation has been met. All health information will be reviewed, maintained, and monitored by the school nurse, and will be included as part of the student record.
- **Establishing procedures for administering medications and medical treatments, including first aid at school;**  
The school nurse will administer medications and medical treatments in accordance with DDOE's *Nursing Technical Assistance Manual and Regulations*, and any other appropriate governmental regulations or professional guidelines when students are onsite at school.
- **Monitoring student health and maintaining health records;**  
The school nurse will monitor and maintain student health records in a secure location and will forward the required documentation of services to DDOE.
- **Ensuring that immunizations and TB screenings are conducted;**  
The school nurse is the on-site health expert for DSA. His or her duties include monitoring student health records. In accordance with state regulations, parents will be

notified when immunization and other screening requirements are not met, and the student will be excluded from school until the regulation has been met. Properly documented immunization exemptions will be considered by the school leader in consultation with the school nurse.

- **Ensuring the school nurse will serve on IEP teams, as required, when medical treatment is necessary;**

The nurse will serve as a member of IEP teams when medical issues are discussed. The nurse will also provide medical information during evaluation processes.

- **Screening for health problems (vision, hearing, orthopedic, etc.); and,**

The school nurse will conduct an active screening program for vision, hearing, orthopedic issues, etc. as prescribed in DDOE's *Nursing Technical Assistance Manual and Regulations*.

- **Establishing procedures for containing and controlling the spread of infectious diseases;**

Procedures will be developed to communicate appropriate precautionary steps for containing and preventing the spread of infectious diseases and other medical conditions.

#### 6. Insurance Coverage.

Related information about insurance coverage and estimated premiums may be found in Attachment 15.

#### 7. Student Records.

DSA will be part of the state's eSchoolPLUS pupil accounting system. The use of this system will ensure timely transfer of student data and records to other schools and the Delaware Department of Education (DDOE). All staff members required to use eSchoolPLUS will be fully trained on the system. DSA will remain current with staff training and data requirements defined by the DDOE.

## 1.9 Facilities

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*14 Del. C. § 512 (8) and (12)*

**1. Discuss the school's facility needs based on the educational program and projected enrollment.**

At the time of this application, the board of the Delaware STEM Academy (DSA) is assessing appropriate sites for the location of the school. Health and safety considerations, along with school size facility calculations for 625 students, are being incorporated into the search. It is anticipated that the facility will be located in the greater Wilmington area in New Castle County and will be acquired through lease or purchase once the school charter has been approved. The specifications used to evaluate appropriate sites include:

- 65,000 square feet under roof for the high school.
- Adequate space (based on New Castle County Zoning Code) to accommodate student drop-off and pick-up logistics as well as faculty, staff, student and parent parking.
- Access from major arterial roadways to facilitate student transportation and safety.
- Depending on the improvement needs of the final facility, the ability to engineer health, fire, and safety systems per state, county, and city codes, as well as to implement storm water management upgrades and modern environmental building systems to create a low-energy-consuming and highly sustainable complex for the future.

**2. If the applicants have identified a facility, state where the school will be located ...**

The suitable site and building design for the DSA has not been determined yet. The board has, however, identified several geographic areas in New Castle County which represent a diverse socio-economic population and potentially underserved students. One potential target area is a geographic corridor located from the south of the City of Wilmington to north of Delaware City, as far west as Route 40. This corridor provides a reasonable distance of travel for students and includes several underserved populations, including the City of Wilmington, some communities along Route 40, and Delaware City.

During the planning phase, the board has worked with the New Tech Network to outline the following requirements for the facility: 8 integrated classrooms (1600-1800 square feet each); 16 regular classrooms (800-900 square feet each); 8 rooms to be used for special education services, art, music, and other special class offerings; 3 science labs (1000 square feet each); 1 library; 1 cafeteria; 1 gymnasium; 5-6 offices; and, collaborative meetings spaces

**3. If the site has been identified, list the detailed terms and/or conditions for the use of the facility.**

The suitable site and building design for the DSA has not been determined yet. As mentioned previously, the school will be located in New Castle County, in the geographic "corridor" located from the south of the City of Wilmington to north of Delaware City, as far west as Route 40. The Board will work closely with their CMO to identify a short-list of sites that meet the criteria listed above for their location. Innovative Schools maintains a list of

active properties in New Castle County that could be used for school space. The Board will also engage with a local relator to assist with this search.

**4. If a facility has not been identified, specify potential locations that are under consideration ...**

DSA will identify, negotiate, and secure a facility prior to December 15, 2014 and will ensure that the facility is in full compliance with all applicable codes and regulations prior to the opening of the school. Construction on the facility will be completed no later than late spring of 2015 so that a Certificate of Occupancy (CO) can be obtained by the deadline of June 15, 2015, in accordance with Delaware charter school law.

Based on research of the prevailing rates in and around the corridor described, the board used an average of \$10.75 per square foot for base rent. The school facility will maintain compliance with all county and city code requirements as applicable and will work with personnel from DDOE to ensure school-specific health, safety, and logistic aspects of the site are addressed.

**5. Explain how the facility will meet the needs of students. Provide an assurance that it will be...**

DSA seeks to enroll a diverse student body including students with physical disabilities. Prior to construction, the board, in conjunction with their construction management firm, will ensure the facility is compliant with the most up-to-date ADA regulations.

**6. To the extent that the Applicant has discussed or established specific lease or purchase terms...**

As a working estimate for occupancy costs, the school has budgeted \$698,000. The preferred site will be an attractive and safe location, providing easy access to the school locations for students and their families.

The school will utilize operating funds provided by the DDOE and annual local revenues, per formula calculations, to pay the occupancy costs and maintain the facility. To ensure that fiscal viability is maintained, the board and the school leader will review enrollment, expenditures, and financial management practices at the monthly board meetings. To ensure financial solvency, particularly during the planning year and first four years of operation, the board intends to aggressively implement a fundraising plan, and, in conjunction with Innovative Schools, to apply for operating and capital loans (see Appendix F-2) to supplement available resources for school operations.

**7. Include, pursuant to 14 Del. C. § 511(I), an affirmative representation by the applicant that..**

The DSA board will await final approval of the school's charter before finalizing any agreements relative to a site and facility. The board will identify, negotiate, and secure a site prior to December 15, 2014 and will ensure that the facility is in full compliance with all applicable codes and regulations prior to the opening of the school. Construction of the facility will be completed no later than late spring of 2015 so that a Certificate of Occupancy (CO) can be obtained by the deadline of June 15, 2015, in accordance with Delaware charter school law.



### 1.10 Budget and Finance

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*(There is no limit to the length of the budget narrative. Include it as a separate document.)*  
*14 Del. C. §§ 512 (8) and (9)*

- 1. Describe the systems and processes by which the school will manage accounting, purchasing, payroll, and audits, per 14 Del. C. § 512(8) and (9). Specify any administrative services expected to be contracted for the school, and describe the criteria and procedures for the selection of contractors.**

Financial operations, including payroll and accounts payable, will be under the direction of the Executive Director, with start-up assistance from Innovative Schools. As the CMO representative, Innovative Schools' on-site project manager will support all budgeting- and finance-related activities with the assistance of Innovative Schools' charter school finance specialists. During the first year of operation, charter school finance specialists from Innovative Schools will work directly with DSA's school leader, Executive Director, and CBOC to develop a projected budget for each fiscal year, for review and approval by the Governing Board during the prior year.

DSA will follow the State Budget and Accounting Policy Manual as it relates to all transaction regulations, guidelines, and filing procedures. The school will use the First State Financials (FSF) system for all financial, accounting, and purchasing transactions. DSA's financial reports will be posted on the school's website on a monthly basis following Board approval. Financial Position Reports, required by Title 14, will be prepared and submitted to the Department of Education. In addition, the school will commission an annual independent financial audit to ensure compliance with the standards of the State Auditor's Office with respect to process controls and segregation of duties.

DSA will utilize the Payroll Human Resource Statewide Technology (PHRST) system for managing and reporting compensation, payroll, personnel information, and employee benefits. All pension-related functions, from the initial actuarial form at the time of employment through the pension application at retirement, will be processed by the Executive Director, who will be properly trained in accordance with state requirements.

DSA intends to hire its teachers as state employees, and as such, will offer compensation packages, retirement, and benefits through the State of Delaware. The school will take advantage of the state purchasing system in order to maximize its buying power. The school may independently contract for certain goods and services as needed and appropriate.

In order to maintain responsible fiscal accounting, planning and management practices and to comply with the requirements of Title 14, Sec 736 of the Delaware Administrative Code a CBOC will be established prior to Year 1 to review and analyze all financial expenditures, management practices, and budgeting. This Committee will have at least five members, including one educator from DSA, one board member, at least two parents or community members who are

not school employees or board members, and a representative from the DDOE. Training for the CBOC will be provided by DDOE. The CBOC will consult regularly with the board and school leader. The committee will remain actively in place during each year of school operation, and will comply with the regulatory requirements for membership, training, and operations.

**2. Budget Sheets. Submit the Charter Application Budget Form in the Budget Sheets (provide the completed Budget Sheets as Attachment 14 and be certain to complete all pages in the Budget Sheets). The Budget Sheets must include separate tabs for State, Local, and Federal funds as well as any other grant funds. Submit two budgets:**

- a. A budget based on your targeted enrollment.**
- b. A budget based on 80% of the targeted enrollment.**

A budget based upon the target enrollment for DSA, a budget based upon 80% of the target enrollment, and salary calculations may be found in Attachments XX-A, B, and C, respectively.

**3. Budget Narrative (Provide as Attachment 17.)**

- a. General Narrative. Provide a detailed budget narrative that clearly describes assumptions and revenue estimates, including but not limited to the basis for Per-Pupil Revenue projections, staffing levels, and costs.**

**All figures contained in the budget worksheets should be clearly identified and explained in the budget narrative. The budget narrative must provide details on how each number on the budget sheet was estimated. A separate budget narrative for the five-year contingency budget based on 80% of targeted enrollment is also required.**

Revenue Estimates for DSA (at full enrollment and at 80% enrollment) may be found in Attachment 14-D through K, respectively. It is the intention of the board to obtain a loan for start-up operations of the school, estimated at 6.75% interest and a 10-year term. The funds received from the loan are reflected on page 3 of the Budget Worksheets in Attachment XX-A and B.

The DSA board has also developed an aggressive Fundraising Plan (Appendix F-2) to defray the costs of school operations. Revenues raised through fundraising activities will be collected by a Fundraising Committee of the board and deposited into the school's First State Financial (FSF) account, in accordance with required procedures. Decisions for the use of these funds will become part of the overall financial planning process for the school, subject to review by the CBOC, and will be part of the annual financial audit of the school.

The contingency finance plan for DSA, should enrollment fall below the projections as presented in this application, will be to reduce personnel and operating costs to meet funding limitations. DSA has demonstrated in this application that it can operate financially at any student level between 200 and 625 students. The minimum number of students the school can

enroll to remain economically viable in year 2 is 320; in year 3, 440; in year 4 and beyond, that number is 500 students.

- b. Expected Funding Sources.** Indicate the amount and sources of funds, property, or other resources expected to be available through banks, lending institutions, corporations, foundations, grants, etc. Note which are secured and which are anticipated, and include evidence of firm commitments, where applicable. What is the school's contingency plan to meet financial needs if anticipated revenues are not received or are lower than the estimated budget?

The DSA board expects to be awarded grants from philanthropic foundations in the amount of \$400,000 in the planning year and \$350,000 in Year 1. A bank loan in the amount of \$660,000 will be secured in Year 1 and \$80,000 in Year 2 to cover the start-up costs and of the school. The contingency finance plan for DSA, should enrollment fall below the projections as presented in this application, will be to reduce personnel and operating costs to meet funding limitations.

- c. Provide details on how financial, personnel, and administrative support will be provided to the charter school and how internal controls will be maintained.**

Budgeting and financial operations will be performed by the Executive Director, with support in the planning year and Year 1 from Innovative Schools finance specialists. The Executive Director will work with DSA's school leader, Governing Board, and the Citizens Budget Oversight Committee to develop a projected budget for each fiscal year, for review and approval by the Governing Board during the prior year.

DSA will utilize the Payroll Human Resource Statewide Technology (PHRST) system for managing and reporting compensation, payroll, personnel information, and employee benefits. All personal, payroll, employee benefits and pension-related functions will be processed by the Executive Director, who will be properly trained in accordance with state requirements.

- 4. Audits.** Describe the financial controls that the school will have in place, including the annual audit of the financial and administrative operations of the school. Include evidence that the school will adhere to the accounting, auditing, and reporting procedures and requirements that apply to public schools operating in Delaware in accordance with the State Budget and Accounting Manual and 29 Del. C. Ch. 69.

In order to maintain responsible fiscal accounting, planning and management practices and to comply with the requirements of Title 14, Sec 736 of the Delaware Administrative Code a CBOC will be established prior to Year 1 to review and analyze all financial expenditures, management practices, and budgeting.

DSA will follow the State Budget and Accounting Policy Manual as it relates to all transaction regulations, guidelines, and filing procedures. The school will use the First State Financials (FSF) system for all financial, accounting, and purchasing transactions. DSA's financial reports will be

posted on the school's website on a monthly basis, following board approval. Financial Position Reports, required by Title 14, will be prepared and submitted to the Department of Education. In addition, the school will commission an annual independent financial audit to ensure compliance with the standards of the State Auditor's Office with respect to process controls and segregation of duties.

- 5. Depositing Funds. Describe the process by which funds will be deposited into the school's state account. If a state account is not used, describe where the funds will be deposited to ensure that all school funds are available for audit by the State Auditor's Office upon request.**

All funds not directly uploaded into the school's FSF appropriations or delivered via Inter-Governmental Voucher will be deposited in person to the state account at a Citizens Bank office by a member of the school staff.

- 6. School closure or dissolution. What is the plan for the procedures that the school will follow in the event of the closure or dissolution of the school? Also, the applicant is to put forth a reasonable plan to establish sufficient available balances pursuant to § 515(k) of this title.**

To prepare for a possible closure or dissolution of the school, DSA will set aside adequate funds to ensure that all employees are paid according to their contractual agreements with the school; to pay any staff who would be required for close-out activities; and, to pay any vendors such as auditors, movers, liquidators, etc. that would be needed (see budget information in Attachment Section 14). All cash and cash equivalents will be distributed first to satisfy outstanding payroll obligations for employees of the school, then to the remaining creditors of the school. To ensure that the funds are available to satisfy all closing costs, the school's board will, over the next five fiscal years, build into its budget a cash reserve until it is at an adequate level to do so. The board will review fund balances and financial projections on a monthly basis to ensure the fiscal health of the school and the maintenance of the reserve fund. In the event that DSA is closed for nonfinancial reasons and, following the authorizer's charter school closure protocol, the DSA board would work closely with the DDOE concerning the steps necessary (parent notification, transfer of records, disposition of school assets, etc.) to ensure a smooth and orderly closure and transition. The school will follow all legal and regulatory requirements such as those contained in Delaware Code 512, Section 16.