

## Curriculum and Instructional Design

### 1. Provide a synopsis of the proposed educational program, including key components of the education model and any unique or innovative features.

Vine's Preparatory School proposes a school for grades 6-8 that seeks to emulate a technical approach to learning. Students at this age are beginning to make decisions that will impact their future, but are often times ill equipped to make these decisions. Wright (2001) exerts that students are not equipped to make informed decisions about their futures contending that students need information about educational and training opportunities, having a work ethic, and even about their own interests and abilities. Students have a need to connect what they are learning in school to real-life situations and career experiences (Wright, 2001). Technical educational programs are meeting these needs head on and are helping kids to invest in their futures. In various states around the world including Virginia, Utah, California, and Massachusetts there are middle-level schools that introduce adolescents to a variety of career options. VPS seeks to offer students the opportunity to start thinking about their futures in a supportive environment and emphasizes to students and their parents the idea that they can make their dreams come true. The school is committed to a high level of academic standards. If Vine's Preparatory School is granted charter, the school will provide students in grades 6-8 with an early exposure to business, engineering, professional development, and other skills that students will be able to carry with them for the rest of their careers and lives.

Vine's Preparatory School will provide students with an academically rigorous, integrated education that uses the United States government as a design to explore various career paths in business and engineering fields. The school seeks to provide the students with a sustainable future through early exploration of career fields in business and engineering. To accomplish this, VPS has selected a technical approach which has proven successful in other states as previously mentioned. Furthermore, the Board of Vine's Preparatory School believes that college and career readiness begins in middle school. The selection of business, engineering and professional development coursework will align with the school's theme of teaching and implementing the rights and responsibilities of being a United States citizen. This will result in providing a rigorous learning experience that will propel academic success for the students at VPS.

The philosophies of VPS are structured around operating with integrity and transparency, academic excellence, and dedication. VPS seeks to provide comprehensive, progressive, and high quality college preparatory education to all students regardless of race or socioeconomic status that will cultivate each students' talents and gifts in the areas of engineering, and business. Students will learn through various modes such as hands on learning, presentations, demonstrations, and laboratories for Science, Math manipulatives, and universal design for learning (UDL) which provides multiple means of representation and modeling. The curriculum is a comprehensive design that aligns with Common Core, Next Generation Science, and the Delaware Recommended Curriculum Standards. For English and Math curricula, VPS will be using Engage NY. For Science and Social Studies, VPS proposes to use the Science Coalition and the Social Studies Coalition. This will provide students with a solid curriculum for the four core areas. Students will work individually, in small groups, and in teams. Students are entrusted with

deep cognitive challenges and important responsibilities, which will prepare them to be leaders and develop critical thinking, problem-solving, and other 21st century skills.

VPS curriculum guide will be modeled after the STEAM approach. In Science, students will learn clear and consistent, researched-based standards. The curriculum will engage students in science instruction that will prepare them to utilize critical thinking and creative problem-solving necessary to excel in the global society that will also align with the engineering career path. Technology courses will teach students about keyboarding, Microsoft Office, and the internet providing students with computer literacy skills that could help them in various arenas of life. Engineering aligns with the school's career path and teaches various areas of engineering affording students the opportunity to learn what this wonderful field has to offer. Art allows students to use their creative abilities in whatever career path they choose. Allowing students to utilize what they are learning in other areas will allow them to paint the picture and to see how all of the subjects connect in order to complete the puzzle. Additionally, in Math, Operation Hope will be integrated in the curriculum to teach students banking and everyday skills such as balancing and writing checks, completing deposits slips, and tracking monetary spending. Social Studies will focus on various areas including the government, civic responsibilities, and functions of the government. This will align with the school's focus of teaching student's their rights and responsibilities of being a United States citizen and afford them with the knowledge base of how the government works. Additionally, it will also teach students positive ways to handle conflict and their constitutional rights in doing so.

**2. Provide a synopsis of how the proposed instructional design reflects the needs of the school's target population, and how all students will meet or exceed the expectations of the Delaware Content Standards (Common Core Standards in English Language Arts, Mathematics, and Next Generation Science Standards) in all content areas.**

VPS intends to operate heterogeneous classes within a small school setting, maximizing the individual attention that each student receives. The student to teacher ratio will be 15:1 optimizing individual attention and increasing student success. VPS anticipates that it will serve a diverse student population that includes children of different races, socio-economic backgrounds, and learning abilities. VPS seeks to meet the needs of different types of learners through innovative instruction. Whether the student is a visual, auditory, or kinesthetic learner, VPS seeks to exemplify instructional design that reflects the needs of the students. At a recent community meeting conducted in Georgetown, the community discussed their concerns with the amount of student suspensions. VPS seeks to take a holistic approach in reducing suspension rates by changing the traditional way students are taught. VPS seeks to offer an instructional design that connects real-life situations, issues, and needs to the curriculum. This approach to teaching makes content and skill standards come alive for students. As previously mentioned, Wright (2001) discussed the importance of making that connection for students. Students need to understand how important the information being taught in schools will be to their futures. The school will offer academically-rigorous student debates, case studies, projects, community work, and service learning activities that will inspire students to think and work as professionals. Students will learn PowerPoint in technology that will assist them with school projects and presentations that they will be able to utilize throughout their entire professional career. The educational program will contribute high-quality work that will last a lifetime.

a. The description of the instructional design should include, as appropriate, the educational approach including class size and structure, teaching methods with a supporting research base, technology integration for all grades to be served, and how the design relates to the mission of the school.

### **Instructional Design**

VPS provides a context and structure for integrating academic, technical, and career skills into holistic learning opportunities. Students need to understand how their learning will affect their future. Additionally, students need to be able to connect education to future career paths. With a 15:1 student to teacher ratio, 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 the aforementioned content using 21st century skills. Through this process, VPS will give students the opportunity to develop real life skills required for success, and productive lives. Students will be challenged with creating and developing various projects that promote critical thinking and problem solving. This approach will provide students with cooperative learning environments, encourage independent thinking, and test application of knowledge while meeting state and national standards.

VPS seeks to utilize strategies that were suggested by the National Education Association in closing the achievement gap. The school will enhance cultural competence by recognizing diverse cultures within the school through various projects and exhibits throughout the year. Additionally, students will have a comprehensive support system including a student support center within the school. The school will also seek to hire qualified and certified staff that are representatives of the local community. VPS will also have an after-school program that will complement the school's focus and career paths. These strategies have proven effective when properly implemented in STEAM programs.

### **Technology**

Technology will be an important component to VPS' approach in that it will support the school's innovative approach to instruction and culture. There will be a 1:1 student to computer ratio for the technology course. Every student will become a self-directed learner. Students will learn keyboarding, the components of Microsoft Office, the internet, and other useful techniques that will be incorporated throughout the education program. Students will be encouraged to utilize the skills learned in their technology course in other classes including PowerPoint presentations, Microsoft Word and Excel projects and web designing projects. During the planning year, the board will consult with 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. Students will be reminded periodically of safe computer usage to that ensure VPS is in compliance with the Children's Internet Protection Act.

b. Present evidence that the proposed educational program is research-based and has been or will be rigorous, engaging, and effective for the expected student population. If evidence of effectiveness in other schools serving similar populations is not available, explain why the proposed program is likely to succeed with the targeted population.

VPS will adopt and implement the curriculum based on the Science Coalition in Science and the Social Studies Coalition in Social Studies. Engage New York's curriculum will be adopted and implemented in Math and English Language Arts which utilize the common core standards. All of the aforementioned programs are researched based and being utilized in various school districts across the United States. According to Marchitello and Wilhelm (2014), a review found that the Common Core promotes greater student learning in the following key ways:

- Scaffolding student learning to provide a strong knowledge base on which new ideas and concepts are stacked
- Holding all students to high expectations, which promotes greater student achievement and growth
- Incorporating the latest research on how students learn to read to help close the literacy gap
- Employing both the traditional method of teaching math and conceptual strategies to provide students with a strong understanding of math and the skills to apply it
- Increasing the opportunities for students to learn from their peers and collaborate on assignments, which improves learning and interpersonal skills
- Promoting problem- and project-based learning, which leads to a deeper understanding of concepts

**3. Provide an overview of the planned curriculum, including, as Attachment 4, 1 scope and sequence per content area per grade band (K-2, 3-5, 6-8, 9-12) the school plans to serve. The scope and sequence documents should identify course outcomes and demonstrate clear alignment with the Delaware Content Standards (including Common Core State Standards in English Language Arts and Mathematics, and Next Generation Science Standards) in all content areas. If the proposed school commits to joining the Science Coalition, then a signed MOU would replace the scope and sequence requirement for Science. If the proposed school commits to joining the Social Studies Coalition, then a signed MOU would replace the scope and sequence requirement for Social Studies.**

The curriculum scope and sequence and sample units for each content area are aligned to the Common Core or Delaware Standards and are included in the attachments section of the charter application. While the scope and sequence contains a full year of content, a unit for each course is also included in the attachment section. VPS proposes to use EngageNY for English and Math. Additionally, the school

commits to joining the Science Coalition and the Social Studies Coalition. A signed MOU for both subjects are included in Attachment 4.

### **Science**

In grades 6-8 teachers will use the instructional units available through the Science Coalition. These are research based units that will incorporate the Next Generation Science Standards. Teachers will attend the training supplied by the Science Coalition so they will be equipped to implement the units in the manner in which they were designed to be used. The kits have been carefully and thoughtfully integrated into each grade level. Through the rich integration of content and the use of real-world learning, students will truly engage in the world of inquiry through the engineering process. As the Science Coalition aligns curriculum to the Next Generation Science Standards, the Vine's Preparatory School Board anticipates a stronger emphasis on STEAM and the integration of engineering into the Coalition curriculum. The Memorandum of Understanding (MOU) is included in Attachment 4. To supplement the science curriculum the teachers will utilize information and lessons from [educade.org](http://educade.org). The lessons on [educade.org](http://educade.org) align with Common Core and Next Generation Standards.

### **Social Studies**

VPS will join the Social Studies Coalition and use the published units and lessons that are based on research and best practices in Social Studies. In grades 6-8, teachers will utilize instructional units through the Social Studies Coalition. The Coalition utilizes research based units that implement instructional practices appropriate for the social studies curriculum. Teachers will attend the training offered by the Social Studies Coalition to increase competence of the curriculum. The Memorandum of Understanding (MOU) is included in Attachment 4. To supplement the curriculum, teachers will also use lessons from [educade.org](http://educade.org).

### **English Language Arts**

As previously mentioned VPS will utilize EngageNY for English Language Arts. VPS 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. ELA curriculum scope and sequence is included in Attachment 4.

### **Mathematics**

VPS will utilize EngageNY for the Math curriculum. In addition, VPS will incorporate Operation Hope into the curriculum material. The curriculum aligns with Common Core Standards and the State of Delaware Standards. Operation Hope teaches students every day skills of banking, saving money, and reduces the chances of continuing the poverty cycle. Students will learn various skills that will last throughout their lifetime. Mathematics curriculum maps are included as Attachment 4.

### **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. Health curriculum maps are included as Attachment 4.

**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.

**Art**

Art curriculum maps are included as part of Attachment 4. In Art students will gain an understanding of the vanishing point, the concept of color mixing, and gain an understanding of symmetry.

**Technology**

Students will receive technology instruction that is aligned to Delaware's technology standards. The content of the technology class will include Microsoft Word, Microsoft Excel, Microsoft PowerPoint, Internet Technology, and Cyber Security. Students will be taught to conduct research using various online resources such as databases, internet searches, and online catalogs. To support learning that is rigorous and based on 21st century skills, students will become proficient in using basic Microsoft Office applications – Word, Power Point, and Excel.

**Business**

In Business, students will be provided with an introduction to business focusing on entrepreneurship, marketing businesses, creating logos, report writing for business, information systems, desktop publishing, and web page design. The students' end of the year project will be to create their own business plan.

**Engineering**

In Engineering students will learn the foundation of engineering technology, engineering design, mechanical engineering, civil engineering, and robotic engineering. At the end of the year students will complete a project based on what they have learned all year.

**4. Provide, as Attachment 5, 1 Mathematics unit with corresponding summative assessment and scoring rubrics, and 1 English Language Arts (ELA) unit with corresponding summative assessment and scoring rubrics to demonstrate alignment of instruction to the Delaware Content Standards (Common Core State Standards in Mathematics and ELA). If the proposed school does not intend to join the Delaware Science or Social Studies Coalitions, then 1 Science unit and 1 Social Studies unit with corresponding summative assessments and scoring rubrics to demonstrate alignment of instruction to the Next Generation Science Standards and Delaware Social Studies Content Standards are also required.**

The units of instruction for each content area are included in Attachment 5.

**5. Describe how the school will ensure that all students have equitable access to the curriculum.**

VPS 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 accommodation for them. The Special Education Coordinator will ensure that all students have equitable access to the curriculum. VPS believes that students who are given opportunities and choices in diverse settings will perform at greater levels and become better equipped for their future. Currently, Sussex County has one charter school. As discussed in the Executive Summary, Sussex County does not provide that option for students.

**6. Describe the methods and systems that teachers will use to provide differentiated instruction to meet the needs of all students, including those who are gifted and talented.**

To differentiate instruction to meet the needs of all students including those who are gifted and talented VPS will engage relevant, student-friendly learning targets that clearly define academic expectations for both the teacher and students. VPS instructors will teach in a way that will reach all types of learners whether it's visual, auditory, kinesthetic, global, analytical, or tactile. Students will be active partners with their teachers in understanding the learning targets and identifying supports and paths which different individuals may need to succeed. As such, classroom and school culture will support the proactive acknowledgement of student diversity and collaboration will ensure that all students get what they need in order to be accepted, safe, and successful. As a fully inclusive school, most students' needs will be met in a heterogeneous classroom through a focus on the common essential learning targets. VPS' student teacher ratio of 15:1 will also provide additional help to students. VPS will also have an after school program that will allocate time for extra help with school/homework. If there are students with more severe learning challenges, the school will provide alternate settings or alternate learning targets as defined by the student's IEP.

**7. Provide a synopsis of plans for additional academic support for at-risk students, including a description of how the school plans to implement procedures to determine whether a student responds to scientific, research-based interventions for reading and mathematics.**

Vine's Preparatory School 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, Dreambox, Lexia, Spelling City, IXL, First in Math, HomeworkSpot.com, and differentiated readings) to support students. Departments will also develop a rotating after-school tutoring schedule that will be a part of the after school program to provide subject-based tutoring to students in need. 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. 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 student's parents or guardians, and the school leader on the student's academic progress. VPS is committed to successful academic achievement for all students,

including those who are at risk. To that end providing additional academic support for at risk students will include but is not limited to consultation with special education teachers, tutorial services, response to intervention, adjusted schedule with additional instructional time, grade level teachers meeting to discuss interventions and high level of parental involvement.

**8. Explain how the graduation requirements will ensure student readiness for college or other post-secondary opportunities (trade school, military service, or entering the workforce).**

Not applicable. VPS will serve students in grades 6-8.