# U.S. Department of Education 2023 National Blue Ribbon Schools Program

	[X] Public or	[] Non-public	
For Public Schools only: (0	Check all that apply) [] Title I	[] Charter	[] Magnet[X] Choice
Name of Principal Ms. Ter	esa Hough		
			ould appear in the official records)
Official School Name Hig	h Technology High School		ds)
	(As it should appear i	n the official recor	ds)
School Mailing Address 76	55 Newman Springs Road		
	(If address is P.O. Bo	x, also include stre	et address.)
City Lincroft	State NJ	Ziŗ	Code+4 (9 digits total) <u>07738-0119</u>
County Monmouth Count	.y		
Telephone (732) 842-844	4	Fax	
		E-mail though@	ctemc.org
<del></del>			<del> </del>
	nation in this application, in nd certify, to the best of my		lity requirements on page 2 (Part I-is accurate.
		Date	
(Principal's Signature)			
Name of Superintendent*	<u>Dr. Charles Ford Jr.</u>		Г
mail cford@ctemc.org	DI. Charles Fold JI.		.L-
	(Specify: Ms., Miss, M	Mrs., Dr., Mr., Oth	er)
District Name Monmouth	County Vocational School I	District Tel. (73	32) 431-7942
	nation in this application, in nd certify, to the best of my		lity requirements on page 2 (Part I-is accurate.
<i>5 , ,</i> , , , , , , , , , , , , , , ,	J,	-	
(Superintendent's Signatur		Date	
(Superintendent's Signatur	6)		
Name of School Board			
President/Chairperson <u>Dr.</u>	Brian McAndrew	, p. 1, 01	
	(Specify: Ms., Miss, N	Mrs., Dr., Mr., Oth	er)
	nation in this application, in nd certify, to the best of my		lity requirements on page 2 (Part I-is accurate.
		Date	
(School Board President's/	Chairperson's Signature)		
The original signed cover s	sheet only should be conver	ted to a PDF file ar	nd uploaded via the online portal.

\*Non-public Schools: If the information requested is not applicable, leave blank.

NBRS 2023 23NJ113PU Page 1 of 19

## PART I – ELIGIBILITY CERTIFICATION

The signatures on the first page of this application (cover page) certify that each of the statements below, concerning the school's eligibility and compliance with U.S. Department of Education and National Blue Ribbon Schools requirements, are true and correct.

- 1. All nominated public schools must meet the state's performance targets in reading (or English language arts) and mathematics and other academic indicators (i.e., attendance rate and graduation rate), for the all students group, including having participation rates of at least 95 percent using the most recent accountability results available for nomination.
- 2. To meet final eligibility, all nominated public schools must be certified by states prior to September 2023 in order to meet all eligibility requirements. Any status appeals must be resolved at least two weeks before the awards ceremony for the school to receive the award.
- 3. The school configuration must include one or more of grades K-12. Schools located on the same campus (physical location and mailing address) must apply as an entire school (i.e. K-8; 6-12; K-12 school). Two (or more) schools located on separate campuses, must apply individually even if they have the same principal. A single school located on multiple campuses with one principal must apply as an entire school.
- 4. The school has been in existence for five full years, that is, from at least September 2018 and each tested grade must have been part of the school for at least the three years prior to September 2022.
- 5. The nominated school has not received the National Blue Ribbon Schools award in the past five years: 2018, 2019, 2020, 2021 or 2022.
- 6. The nominated school has no history of testing irregularities, nor have charges of irregularities been brought against the school at the time of nomination. If irregularities are later discovered and proven by the state, the U.S. Department of Education reserves the right to disqualify a school's application and/or rescind a school's award.
- 7. The nominated school has not been identified by the state as "persistently dangerous" within the last two years.
- 8. The nominated school or district is not refusing Office of Civil Rights (OCR) access to information necessary to investigate a civil rights complaint or to conduct a district-wide compliance review.
- 9. The OCR has not issued a violation letter of findings to the school district concluding that the nominated school or the district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan from the district to remedy the violation.
- 10. The U.S. Department of Justice does not have a pending suit alleging that the nominated school or the school district, as a whole, has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
- 11. The nominated school has, or is subject to, a nondiscrimination policy (provide either a link to the policy or submit a text of the policy), is committed to equal opportunity for all students and all staff consistent with applicable law and does not have any outstanding findings of unlawful discrimination. The U.S. Department of Education reserves the right to disqualify a school's nomination and/or rescind a school's award if unlawful discrimination is later discovered.

NBRS 2023 23NJ113PU Page 2 of 19

12. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the school or school district in question; or if there are such findings, the state or district has corrected, or agreed to correct, the findings.

The U.S. Department of Education reserves the right to disqualify a school's nomination and/or rescind a school's award if one of these eligibility requirements is later discovered to have not been met or otherwise been violated.

NBRS 2023 23NJ113PU Page 3 of 19

## PART II - DEMOGRAPHIC DATA

## Data should be provided for the current school year (2022-2023) unless otherwise stated.

**DISTRICT** (Question 1 is not applicable to non-public schools. For charter schools: If a charter school is part of the public school system, information should be provided for the public school district. If a charter school is considered its own district or part of a charter district, the information provided should reflect that.)

1.	Number of schools in the district (per district designation):	<ul> <li><u>0</u> Elementary schools (includes K-8)</li> <li><u>0</u> Middle/Junior high schools</li> <li><u>6</u> High schools</li> <li><u>0</u> K-12 schools</li> </ul>
		<u>6</u> TOTAL

SCHOOL (To be completed by all schools. Only include demographic data for the nominated school, not for the district.)

2. Category that best describes the area where the school is located. If unsure, refer to NCES database for correct category: <a href="https://nces.ed.gov/ccd/schoolsearch/">https://nces.ed.gov/ccd/schoolsearch/</a> (Find your school and check "Locale")

[] Urban (city or town)
[] Suburban
[X] Rural

3. Number of students in the school as of October 1, 2022 enrolled at each grade level or its equivalent at the school. Include all students enrolled, in-person, participating in a hybrid model, or online only. If online schooling or other COVID-19 school issues make this difficult to obtain, provide the most accurate and up-to-date information available:

Grade	# of Students		
PreK	0		
K	0		
1	0		
2	0		
3	0		
4	0		
5	0		
6	0		
7	0		
8	0		
9	74		
10	69		
11	70		
12 or higher	72		
Total	285		
Students	263		

<sup>\*</sup>Schools that house PreK programs should count preschool students **only** if the school administration is responsible for the program.

NBRS 2023 23NJ113PU Page 4 of 19

Racial/ethnic composition of the school (if unknown, estimate): 60 % Asian

1 % American Indian or Alaska Native

1 % Black or African American

4 % Hispanic or Latino

0 % Native Hawaiian or Other Pacific Islander

30 % White

4 % Two or more races

100 % Total

(Only these seven standard categories should be used to report the racial/ethnic composition of your school. The Final Guidance on Maintaining, Collecting, and Reporting Racial and Ethnic Data to the U.S. Department of Education published in the October 19, 2007 Federal Register provides definitions for each of the seven categories.)

5. Student turnover, or mobility rate, during the 2021 - 2022 school year: 2%

If the mobility rate is above 15%, please explain:

This rate should be calculated using the grid below. The answer to (6) is the mobility rate.

Steps For Determining Mobility Rate	Answer
(1) Number of students who transferred <i>to</i> the school after October	0
1, 2021 until the end of the 2021-2022 school year	
(2) Number of students who transferred <i>from</i> the school after	6
October 1, 2021 until the end of the 2021-2022 school year	
(3) Total of all transferred students [sum of rows (1) and (2)]	6
(4) Total number of students in the school as of October 1, 2021	291
(5) Total transferred students in row (3) divided by total students in	0.02
row (4)	
(6) Amount in row (5) multiplied by 100	2

Specify each non-English language represented in the school (separate languages by commas):

English Language Learners (ELL) in the school: 0 %

0 Total number ELL

Students eligible for free/reduced-priced meals: 7. 2 %

> Total number students who qualify: 7

**NBRS 2023** 23NJ113PU Page 5 of 19 8. Students receiving special education services with an IEP: 0%Total number of students served 0

Indicate below the number of students with disabilities according to conditions designated in the Individuals with Disabilities Education Act. Do not add additional conditions. All students receiving special education services with an IEP should be reflected in the table below. It is possible that students may be classified in more than one condition.

Q Autism
 Q Deafness
 Q Orthopedic Impairment
 Q Deaf-Blindness
 Q Other Health Impaired
 Q Developmental Delay
 Q Specific Learning Disability
 Q Emotional Disturbance
 Q Speech or Language Impairment
 Q Hearing Impairment
 Q Traumatic Brain Injury
 O Visual Impairment Including Blindness

9. Students receiving special education services with a 504: 2 %
Total number of students served: 7

- 10. Number of years the principal has been in the position at this school: 1
- 11. Use Full-Time Equivalents (FTEs), rounded to the nearest whole numeral, to indicate the number of school staff in each of the categories below. If your current staffing structure has shifted due to COVID-19 impacts and you are uncertain or unable to determine FTEs, provide an estimate.

	Number of Staff
Administrators	1
Classroom teachers, including those teaching high school specialty subjects, e.g., third grade teacher, history teacher, algebra teacher.	25
Resource teachers/specialists/coaches e.g., reading specialist, science coach, special education teacher, technology specialist, art teacher etc.	0
Paraprofessionals under the supervision of a professional supporting single, group, or classroom students.	0
Student support personnel e.g., school counselors, behavior interventionists, mental/physical health service providers, psychologists, family engagement liaisons, career/college attainment coaches, etc.	3

12. Average student-classroom teacher ratio, that is, the number of students in the school divided by the FTE of classroom teachers, e.g., 22:1 11:1

NBRS 2023 23NJ113PU Page 6 of 19

13. Show daily student attendance rates. Only high schools need to supply yearly graduation rates.

Required Information	2021-2022	2020-2021	2019-2020	2018-2019	2017-2018
Daily student attendance	97%	99%	98%	96%	97%
High school graduation rate	100%	100%	100%	100%	100%

## 14. For high schools only, that is, schools ending in grade 12 or higher.

Show percentages to indicate the post-secondary status of students who graduated in Spring 2022.

Post-Secondary Status	
Graduating class size	67
Enrolled in a 4-year college or university	100%
Enrolled in a community college	0%
Enrolled in career/technical training program	0%
Found employment	0%
Joined the military or other public service	0%
Other	0%

15. Indicate whether your school has previously received a National Blue Ribbon Schools award. Yes X No

If yes, select the year in which your school received the award. 2003

16. In a couple of sentences, provide the school's mission or vision statement.

To prepare students to become proactive and creative problem solvers, effective communicators, and tomorrow's leaders through a rigorous, specialized curriculum and collaborative partnerships.

17. Provide a URL link to the school's nondiscrimination policy.

https://www.straussesmay.com/seportal/Public/DistrictPolicy.aspx?policyid=5750&id=be5f2859df2147918 149969f1f5a5ca5

18. **For public schools only**, if the school is a magnet, charter, or choice school, explain how students are chosen to attend.

Students may apply for admission to High Technology High School during their eighth grade year provided that they are full-time Monmouth County residents. To be considered for admission, students must attend one of the four information sessions offered between September and November with a parent/guardian, complete the online admissions application and submit all of the supporting documentation by the prescribed deadline, and take an admissions exam that is based on the New Jersey Student Learning Standards for Mathematics and English Language Arts.

The admission process for High Technology High School has become increasingly competitive since its founding in 1991. Each year, only seventy-five students are selected from a pool of over three hundred outstanding applicants to enroll in this nationally ranked institution as freshman. Applicants are ranked in accordance with the following scoring system: 7th Grade Final GPA (15 points), 8th Grade Marking Period 1 GPA (15 points), Math Admission Exam (35 points), and ELA Admissions Exam (35 points). The top-scoring student from each sending district is offered admission to HTHS and the remaining applicants are then ranked to fill vacant admission slots.

NBRS 2023 23NJ113PU Page 7 of 19

## PART III – SCHOOL OVERVIEW

High Technology High School (HTHS) opened in Lincroft, NJ in 1991 with a focus on the field of engineering. The student body is drawn from towns across Monmouth County, NJ. Any Monmouth County 8th grader can elect to take the admissions exam, and the top-scoring student from each sending district is offered admission to the school. The remaining applicants are ranked to fill the vacant admission slots. HTHS currently has an enrollment of 285 students. The staff is comprised of 25 full-time teachers, 2 guidance counselors, 1 school nurse, 2 office secretaries and 3 custodians. In the 32 years since it opened its doors, HTHS students have consistently maintained high SAT scores with averages of 747 in Reading & Writing and 775 in Mathematics for the Class of 2022. In 2018-2019, 99% of HTHS students demonstrated proficiency on the NJSLA in English Language Arts and 100% of HTHS students demonstrated proficiency on the NJSLA in Mathematics.

HTHS provides a rigorous, theme-based curriculum that encompasses the emerging areas of electrical, mechanical, civil, biomedical, and software engineering. Our thematic course offerings include, but are not limited to Introduction to Engineering Design, Principles of Engineering, Software Engineering, Civil Engineering & Architecture, Digital Electronics, and Biomedical Engineering. All of these courses are taught at the honors level which provides an increased intellectual challenge for students. At HTHS, students are provided with practical learning opportunities and hand-ons experiences to prepare them for the global workforce through industry partnerships and community collaborations.

The school follows a 5-day rotating schedule with five 67-minute class periods each day. Extended class periods allow teachers and students to delve deeply into content by offering time for performance-based tasks, inquiry-based activities, and differentiated instruction. In addition, a one hour lunch/activity period provides time for greater involvement in clubs, individual academic support from teachers, and student/teacher collaboration on academic and service projects.

Students participate in a variety of activities and clubs, such as the Math League, Science League, Robotics & Coding Club, TSA, Experimental Research Club, and Academic Team. Many of our students have earned state, national, and international awards for their competition performance in the areas of robotics, mathematics, science, research, chess, engineering design, and academic trivia.

HTHS students utilize a tremendous variety of technology every day. There are 5 computer labs with desktop and Apple computers and more than 150 chrome books available for student use in class or during lunch. Graphing calculators, 3-D printers, science labs, and technology labs enhance learning. Students are taught to use an array of programming software and a wide-range of engineering tools and equipment.

HTHS enjoys partnerships with over 50 industry, government, and educational organizations to supplement classroom instruction with a senior mentorship, enabling students to gain real-world experience in engineering careers. These partners provide feedback about our curriculum and support school based outreach programs such as CypHER and Snacks with a Scientist.

Within the HTHS community, all stakeholders meet to address needs as they arise. Through monthly review meetings with the Instructional Council and the Professional Learning Communities, every HTHS goal, data driven or not, is met and exceeded. The collective faculty conducts annual reviews during closing staff days, and our curriculum is revised every three years for proficiency and alignment.

The profile of a High Technology High School Graduate is an individual who communicates with confidence and competence in oral, visual, and written forms, demonstrates a high level of competency using current technology, synthesizes information in innovative and creative ways and works collaboratively to achieve academic professional goals.

The mission statement included in this application along with the profile of a HTHS graduate help define the HTHS community and guide the planning process throughout the school year. The small staff continually works to monitor progress and make recommendations to improve each student's educational experience and

NBRS 2023 23NJ113PU Page 8 of 19

environment. The mission statement and profile are continually reviewed and revised as living documents. Industry feedback from our mentorship partners is incorporated into our curriculum, as well as input from parents and community based organizations. Reflection and growth are foundational to the culture of HTHS, as is the constant pursuit of a better outcome for our students.

NBRS 2023 23NJ113PU Page 9 of 19

## PART IV – CURRICULUM AND INSTRUCTION

#### 1. Core Curriculum, Instruction, and Assessment.

## 1a. Reading/English language arts curriculum content, instruction, and assessment:

The English Language Arts (ELA) program sequence from 9th to 12th grade is designed to provide students with a comprehensive understanding of language and literature. The program is structured to develop students' abilities to read, write, speak, and listen effectively in order to communicate their ideas and opinions clearly and persuasively. The primary aim of the ELA curricula is to encourage students to question the meaning of a variety of texts. The curriculum is taught at an honors level and is organized thematically, asking students to assess universal themes in literature and how these themes transcend time and culture.

In the 9th grade, the ELA curriculum focuses on building fundamental skills in reading comprehension, writing, grammar, and vocabulary. Students learn to analyze and interpret various types of texts, including fiction, nonfiction, poetry, and drama. They also develop their writing skills through assignments such as personal narratives, literary analyses, and argumentative essays. Students are given the freedom to choose independent readings for their daily reading tasks and literary circle activities.

In the 10th grade, the focus of the ELA program shifts towards the study of literature. Students explore classic and contemporary works of fiction and nonfiction, including novels, short stories, plays, and poetry from an array of diverse voices. They continue to develop their writing skills through a variety of assignments that incorporate literary analysis and critical thinking.

In the 11th grade, the ELA program incorporates the study of American literature, including works by authors such as Mark Twain, F. Scott Fitzgerald, and Toni Morrison. Students learn to analyze the historical and cultural contexts in which these works were written, and to explore the themes and motifs that run throughout them. They also continue to develop their writing skills through research papers, persuasive essays, and other advanced technical writing assignments.

Finally, in the 12th grade, students analyze the language and themes of contemporary works in depth, and develop their critical thinking skills through class discussions and writing assignments. The course focuses on preparing students for college and careers, with an emphasis on building skills in expository writing, research writing, public speaking, and argumentation.

Students are assessed using a variety of methods that align with the unique context of the school. These include performance based tasks (debates, presentations) peer assessments (peer editing of written assignments, peer evaluations of group projects) self-assessments, quizzes, class discussions, formal and informal writing assignments, and finally, authentic assessments that focus on real-world tasks or activities that reflect the types of communication skills students will need in their future careers in engineering. This could include writing technical reports, drafting engineering-related documents, or creating multimedia presentations that incorporate technical information.

#### 1b. Mathematics curriculum content, instruction, and assessment:

The rigorous math curriculum is designed to equip students with the knowledge and skills required to prepare them for college and careers in high-demand STEM fields. The curriculum starts with foundational topics such as Geometry and Algebra II, building a solid understanding of mathematical concepts and problem-solving techniques. Students are exposed to both theoretical and practical applications of these concepts, including the use of mathematical modeling and simulation to solve real-world problems. The program progresses to more advanced topics, including AP Calculus, AP Statistics, and Multivariable Calculus. In AP Calculus, students learn the fundamental concepts of limits, derivatives, and integrals, as well as their applications in physics, engineering, and other fields. In AP Statistics and Data analysis, students learn how to collect, analyze, and interpret data, including the use of statistical software and the

NBRS 2023 23NJ113PU Page 10 of 19

development of statistical models. Students learn how to reason logically, develop proofs, and use deductive and inductive reasoning to solve problems. This would involve the study of logic, set theory, and mathematical proofs. To ensure that students are prepared for the demands of college and the workforce, the curriculum includes a focus on practical applications of mathematics in a variety of fields, including finance, engineering, and computer science.

The students' ability to apply math to solve problems, analyze data, and make informed decisions may be evaluated through project presentations, reports, and demonstrations. Students may be given math problems or scenarios that require them to use critical thinking, reasoning, and problem-solving skills to solve real-world engineering problems. These problems may involve multiple steps and may require students to apply various mathematical concepts and techniques to arrive at a solution.

## 1c. Science curriculum content, instruction, and assessment:

The science sequence begins with Lab Biology. Through joint projects, laboratory investigations, field studies, lecture/discussion and individual and team research, the program nurtures an environment of cooperative learning and critical thinking. Learning is student oriented as students select the specific areas of interest upon which their research will focus. Topics will include ecology, cytology, cellular energetics, heredity, molecular genetics, evolutionary biology, taxonomy, and the structure and function of plants and animals. Opportunities are provided for independent and small group research projects (both descriptive research and experimental research) throughout the year. Learning activities dealing with experimental designs, apparatus set-ups and data analysis are enhanced by the computer applications and technology components of the program along with connections to the research and data analysis mini-courses required of all HTHS freshman students.

Following Biology, students register for lab physics. This course provides students with the conceptual tools and "hands-on/minds-on" experiences that will enable them to predict the behavior of physical systems and explain phenomena that they see every day in the world around them. Students continue to experience science as an investigative process and mathematics as a tool for modeling systems and analyzing data. They expand their ability to think critically, formulate questions and methods of inquiry, as well as analyze and collect data. There are many opportunities to practice safety and teamwork in the laboratory setting, and experience science as a pursuit that not only answers questions, but asks them as well. Students not only gain and exercise the knowledge and skills they need to succeed in current and future scientific endeavors, but that they will also appreciate how a few simple principles can account for the enormity and complexity of physical phenomena around them.

Lab Chemistry is an experimental science that combines academic study with the acquisition and development of practical and investigational skills. The course aims to balance the needs of a content-oriented syllabus with the development of the critical-thinking skills required by the experimental scientist. The course reflects the need to ensure that the qualifications will be met for students wishing to enter university study in the sciences; it will also develop students' investigational skills in the use of the scientific method, involving the formation, testing and modification of a hypothesis through observation and measurement, under the controlled conditions of an experiment. The course will also allow students to develop their problem-solving and analytical skills, as well as provide opportunities for students to become more aware of the moral, ethical, social, economic and environmental implications of using science and technology. It is expected that by exploring chemistry, students will have a better appreciation for, and will acquire a sense of belonging to their environment. Problem solving, laboratory investigation, and technology are an integral part of the curriculum. Students will be encouraged to think scientifically and creatively.

Students can choose to take AP chemistry, AP Physics, or AP Biology during their senior year. Students are assessed via quizzes, tests, lab reports, presentations, interactive simulations, projects, and virtual labs.

### 1d. Social studies/history/civic learning curriculum content, instruction, and assessment:

NBRS 2023 23NJ113PU Page 11 of 19

The history curriculum is designed to provide students with a broad understanding of the major historical events and trends that have shaped the world and to help them develop critical thinking and analysis skills that they can apply in college and beyond. Through the study of history, students learn critical thinking skills, analysis, and problem-solving, as well as gain an appreciation for different cultures and perspectives. The program begins with a World History survey course where students receive an overview of ancient engineering practices, such as those used in the construction of the pyramids and other monumental structures. Moving forward, the curricula covers the Industrial Revolution and how it transformed society, including the development of steam engines, textile mills, and other technological advancements. In Grade 11, students continue to learn about U.S. history. This includes the period of colonization and the American Revolution, the formation of the United States government, the expansion of the country through westward expansion, the Civil War and Reconstruction, the rise of industrialization and urbanization. This would include an exploration of the development of electrical and computer engineering, the rise of the Internet and mobile technologies, and the impact of these technologies on society. Throughout the curriculum, students are encouraged to analyze historical events and technological advancements from an engineering perspective. In 12th grade, students have the option to take specialized history courses, including topics such as globalization, the environment, and human rights.

Our common approaches to assessing students in history include document-based essays, document analysis activities, class discussions, debates, presentations, debates, simulations, tests and quizzes.

#### 1e. For schools that serve grades 7-12:

As a member of the Monmouth County Vocational School District, our instruction revolves around college and career readiness. Each sequence of academic courses is designed to produce students who can manage time, study efficiently, work collaboratively, and operate independently when they go to college. Every HTHS student participates in a senior year mentorship, where they work in a local company to gain professional experience. Prior to starting their mentorship, seniors meet the mentorship coordinator individually and collectively to outline our expectations for professionalism in dress, behavior, and work ethic. The mentorship coordinator conducts regular site visits and reviews the mentoring logs submitted by our students weekly. At the conclusion of the mentorship, each student is required to give a final presentation on their mentorship experience.

## 1f. For schools that offer preschool for three- and/or four-year old students:

## 2. Other Curriculum Areas:

#### 2a. Arts (visual and/or performing)

Students fulfill their Visual and Performing Arts requirement by taking Introduction to Engineering Design their freshman year. Introduction to Engineering Design (IED) is a foundational course in the Project Lead the Way Engineering Program. In IED students are introduced to the engineering profession and a common approach to the solution of engineering problems, an engineering design process. Several essential questions frame students' learning: How do artists and designers determine goals for designing or redesigning objects, places, or systems? How do artists and designers create works of art or design that effectively communicate? Utilizing the activity-project-problem-based (APB) teaching and learning pedagogy, students progress from completing structured activities to solving open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills.

Through both individual and collaborative team activities, projects, and challenge exercises, students work to solve problems as they practice common engineering design and development protocols such as project management and peer review. Students develop skill in technical representation and documentation of

NBRS 2023 23NJ113PU Page 12 of 19

design solutions according to accepted technical standards, and they use current 3D design and modeling software to represent and communicate solutions. In addition, the development of computational methods that are commonly used in engineering problem solving, including statistical analysis and mathematical modeling, are emphasized.

#### 2b. Physical education/health/nutrition

The comprehensive health curriculum builds upon the students' strong foundation of knowledge, skills, and attitudes for health promotion. Through critical thinking, problem solving and teamwork; students explore issues surrounding personal and community safety and develop strategies, skills and attitudes to prevent and address specific safety issues. By adopting safety conscious attitudes and practices, students demonstrate ongoing and expanding responsibility for the well-being of self and others. The goal of the health program is to develop students who are able to form healthy relationships, use social skills appropriately, demonstrate a sense of intellectual curiosity, and practice health enhancing behaviors in preparation for their roles as well educated, productive citizens. Students study topics related to personal health, such as stress management, mental health, substance abuse prevention, chronic disease prevention. The program of study also covers community health issues, such as public health policies and environmental health, global health, and health disparities.

As a part of the physical fitness program, students analyze their fitness behavior patterns and develop short and long-range goals for personal improvement. The strategies incorporated allow students to develop the skills to create an appropriate plan for change, thereby accepting personal responsibility for their health and well-being. Students work independently and in small groups in a monitored environment to achieve personal goals and enhance the social aspects of physical fitness and lifelong activities. Giving students the opportunity to participate in group games and activities teach them strategies to prevent, mediate, and resolve conflict as well as communication skills. Students are encouraged to maintain a playful attitude and develop self-confidence through a curriculum that provides cognitive content and learning experiences in a variety of activity areas such as basic movement skills, physical fitness, games, team, dual and individual sports. The knowledge and skills gained from this comprehensive approach contribute to a high quality of life for the student, the family, and the community.

#### 2c. Foreign language(s), if offered (if not offered, leave blank)

Students have the option of choosing from three World Languages at HTHS: French, Latin or Spanish. Once they achieve an advanced standing, they may opt to take the Seal of Bilteracy exam. All French and Latin students are enrolled in their respective national exam.

The French program sequence for HTHS includes five levels: French I through French V. The curriculum is designed to develop students' proficiency in the French language, with a focus on developing listening, speaking, reading, and writing skills. The reading of history and culture is thoroughly studied, and themed projects allow students to further their knowledge and educational experience. Advanced grammar allows students to speak and write more complicated passages on current events and world affairs.

The Latin I-IV program provides students with a strong foundation in a classical language, and helps them develop important skills in critical thinking, analysis, and language acquisition. Additionally, for students interested in pursuing a career in engineering, the program is valuable for understanding the history and cultural context of the field.

Latin I is an introduction to the linguistic structure, vocabulary, and pronunciation of the Latin language. In addition, it focuses on the geography of the ancient world and provides an in-depth study of the culture of its inhabitants. In Latin II, students continue to develop their understanding of Latin grammar and vocabulary, and read more complex texts, including excerpts from classical Roman literature. Once students enter Latin III, they focus on translating longer and more difficult texts, such as speeches and philosophical treatises, while also deepening their knowledge of Roman culture and history. Finally, in Latin IV, students engage in advanced readings of Latin literature, such as the works of Virgil, Cicero, or Ovid, and may also explore specific topics related to the Latin language and Roman culture.

NBRS 2023 23NJ113PU Page 13 of 19

Students have an opportunity to delve into four years of Spanish and enroll in Spanish V depending on their proficiency level. In Spanish I, students use the language as a tool of communication in real life situations. They master the basic concepts by oral presentation and participation. Major emphasis is placed in the creative use of the target language and students are expected to function accurately in the situations they are most likely to encounter when visiting a Spanish speaking country or when interacting with speakers of Spanish.

Spanish II is a refinement and expansion of skills learned in level one. The primary focus of the course is effective communication, which includes understanding what others say and relaying one's own messages using appropriate grammar and vocabulary. Students use the language to function in situations one might encounter in a Spanish-speaking environment, and they explore and appreciate the relationship between language and other disciplines. Spanish III continues the development and refinement of the speaking, listening, reading and writing skills, as students engage in many communicative pursuits that foster creativity and higher level thinking skills. A cultural knowledge of the Spanish-speaking world is integrated throughout the course. The primary focus of Spanish IV continues to be effective communication--both through increasing the vocabulary and grammar structures as well as understanding the literature, history, and culture of Spanish-speaking regions of our world. Spanish V is a college-level course designed to help students improve their ability to read and write Spanish and expand their knowledge of Hispanic cultures and societies.

## 2d. Technology/library/media

The technology curriculum at HTHS is integrated within all of our core academic courses and focused on teaching students how to use the specific technology prioritized in industry. For example, students learn how to use the vernier probes in a lab setting, learning the importance of accurate data collection and the use of technology in science. Students collect more precise and accurate data, which can be analyzed to draw more meaningful conclusions. In math, students learn how to navigate the TNspire technology and how engineers use this technology to handle a wide range of calculations, including calculus, differential equations, and matrix algebra. Its advanced graphing capabilities can also help engineers visualize data and understand complex relationships between variables.

The thematic programs ensure that the industry-valued technical skills are embedded throughout the curriculum. In AP computer science, students learn programming languages, algorithms, and software development tools. They also gain experience in creating applications, developing websites, and troubleshooting software issues. In Introduction to Engineering Design students learn about the principles of engineering design, including the use of CAD software, project planning, and analysis. Students use 3D printers to create projects related to robotics, circuit design, and other areas of engineering. In another one of our freshman foundational courses, Data Analysis, students learn how to collect, organize, and analyze data using various statistical methods and software tools before they learn to interpret data and use it to inform decision-making processes. Overall, the technology curriculum in a high school CTE program is designed to provide students with a solid foundation in technical skills and knowledge that will prepare them for a wide range of careers related to the theme of the school. The integration of different subject areas helps students develop a holistic understanding of technology and its applications in various fields.

## 2e. Any other interesting or innovative curriculum programs you would like to share

#### 3. Academic Supports

#### 3a. Students performing below grade level:

High Technology High School strives to provide every student with the tools they need to succeed. If a student's marking period grade falls below 77% in a given course, then a Pupil Improvement Plan (PIP) is created. The PIP engages the student and all support systems, including the parents/guardians, guidance

NBRS 2023 23NJ113PU Page 14 of 19

counselor and the principal, to come together to help the student achieve proficiency in the course competencies. Our teachers make themselves available to students during lunch for extra help and after school. We also have a peer tutoring program that is organized and run by the members of the National Honor Society. All peer tutors are students who have demonstrated a high level of proficiency in the subjects they tutor.

## **3b.** Students performing above grade level:

High Technology High School strives to support and challenge every student at their level. Students who are working above grade-level may attend college-level classes at Brookdale Community College. In addition, many of our teachers offer extra help to students who are pursuing AP credit in courses that are not formally offered at High Technology High School.

- 3c. Students with disabilities:
- 3d. English Language Learners:
- 3e. Other populations, if a special program or intervention is offered:

NBRS 2023 23NJ113PU Page 15 of 19

## PART V – SCHOOL CLIMATE AND CULTURE

## 1. Engaging Students:

Students who choose to attend HTHS and are motivated by a rigorous theme-based curriculum. Beginning with the application process students are continually engaged at HTHS. Applicants attend information sessions that are run by current students who are eager to answer questions and share their passion for the school. Once students are accepted, they attend freshman orientation in the Spring, where they are given the opportunity to participate in a series of team-building activities and problem solving exercises sponsored the Freshman Council. At the start of the school year, incoming students are invited to attend a series of interest meetings sponsored by the various clubs within our school. The list of HTHS clubs includes, but is not limited to, the Student Government Association, Yearbook Club, Performing Arts Club, Dance Club, Jazz Band, Wellness Club, and the Genders & Sexualities Alliance. In addition, the guidance counselors meet individually with the incoming freshman students within the first month of school. These meetings serve to acquaint Guidance staff with each pupil on a personal level. During the students' sophomore year, the guidance counselors meet with individual students to conduct a personality assessment, create action plans to achieve a personal and academic goal, and assist them in developing a resume. During the students' junior year counselors meet with each junior student and their parents to assist in the college planning process. The guidance counselors publish a monthly newsletter, The Stall Door, to promote social and emotional learning. Both of them are available throughout the day to meet with students that have questions or concerns. They work tirelessly to support students and faculty.

Students are supported academically in a multitude of ways. Teachers make themselves available to students for extra help during the hour-long lunch/activity period. The majority of our school clubs also meet during this time. Additionally, our National Honor Society peer tutors are regularly available to assist students by appointment during lunch/activity period and after school. Grade level meetings take place among teachers, counselors, and administration each marking period and work to solve student academic issues.

#### 2. Engaging Families and Community:

High Technology High School has an outstanding relationship with the community and families it serves. From the very beginning HTHS offers four information sessions per year that are designed to attract potential eighth grade students and to communicate our program of study. This process continually evolves based on our accomplishments and the success of our graduates at the end of each school year. This yearly endeavor brings thousands of people through our doors and allows us to engage them in our student success. The information session also begins a very specific journey that identifies both students and parents who are interested in their education because parents and students are required to attend in order to get an application. This introduction to HTHS provides a clear overview to our curriculum, student activities, culture and expectations.

Once a student is accepted into HTHS, the student and family are welcomed to our community through an orientation program. At the orientation the students participate in ice-breakers and team building activities so they can get to know one another. The parents meet with the executive board of our Parent Student Faculty Association (PSFA). The PSFA outlines all the benefits of becoming an active member to support the mission of the school. At the end our orientation the students and parents are familiar with the aspects of becoming a member of the HTHS community.

The PSFA is an integral part of this community and meets once a month to promote our mission. The Principal meets with the membership during their monthly meetings to discuss upcoming events and provide guidance to programs that will benefit the student body. The PSFA organizes and supports programs for SAT Preparation, student research, student awards, beatification projects, and funding for field trips, extracurricular activities, and resources for staff members.

In addition to the hands on approach of meeting with the PSFA the school engages the community through

NBRS 2023 23NJ113PU Page 16 of 19

its regular resources of monthly PSFA newsletter, the school website, Twitter, faculty meetings, student meetings, and our annual Back to School Night.

## 3. Creating Professional Culture:

High Technology High School is one of the six career academies within the Monmouth County Vocational School District. The district places a high value on professional development. Employees begin their time at HTHS with a week-long, new employee training that is a complete introduction to the policies and procedures of the district, as well as a forum for pedagogical workshops across five days. Training on many of the districts's online support systems, including the district curriculum platform, Atlas, the Understanding by Design Framework, the Frontline Evaluation System, and the PowerTeacher Online Grading System is given during new employee training. Throughout the school year, professional development is offered in content specific areas, technology training, and best practices. The presenters are experienced educational leaders from within and outside the district. Additionally, academic departments participate in district level PLCs that establish goals and meet monthly to work toward realizing said goals. PLC's record their meeting minutes and share them the career academy principals. The career academy principals meets regularly with the district administrators to collaborate and discuss district wide concerns.

There is a collegial atmosphere throughout HTHS. Teachers are supported by each other and by administration and support staff. Staff uses their building level PLC time to have meaningful pedagogical discussions and to enhance student learning. Additionally, teachers are encouraged to seek professional development opportunities on their own. Faculty and instructional council meetings are open forums used to encourage communication, discuss current issues, and to foster staff-wide discussions.

## 4. School Leadership:

High Technology High School has 1 full-time administrator. There is also an Assistant Principal, shared between 6 of the district's career academies. This organizational structure helps to facilitate direct and vibrant communication between the principal and the building staff. There is a department for each academic area and for the school theme faculty, but there are no department heads or supervisors, providing unlimited opportunity for faculty to contribute to the leadership and instructional direction of the school. The Instructional Council meets once a month. It is comprised of faculty from all departments and the principal. They meet to discuss and decide on larger issues, such as the introduction of new courses or the creation of academic integrity policy. Any staff member within the school may bring an item to the Instructional Council for consideration. Another instructional leadership opportunity is the HTHS Advisory Board. The HTHS Advisory Board is made up of industry partners who hire our students for credit-based internships, faculty, student representative, and the principal. The feedback from these partners informs curriculum and career-readiness initiatives throughout the school. The leadership philosophy is based on continuous, student-centered improvement. Every initiative, meeting, and act is focused on improving the learning experience for each individual in the school. The leadership and faculty are engaged in a constant iterative process of celebrating successes and understanding failures, reflecting on both and deciding on a path that moves us toward improved student achievement. This may be enacted on a large scale, such as maximizing time in the schedule, or it may be enacted on a small scale, such as the effectiveness of a single lesson.

### 5. Culturally Responsive Teaching and Learning:

HTHS strives to address the needs of students through diversification of the curriculum and teaching materials. For example, students given the opportunity to explore a wide-range of topics such as human rights, civil rights, culture, race, class, democracy, religion, and gender by reading texts written by diverse authors in the humanities courses. In addition, social media and popular culture are frequently used to increase student engagement in learning activities, promote collaboration among students, and help students make connections between what they are learning in class and their own experiences. Students are provided with opportunities to strengthen their relationships with their teachers and peers through participation in various club activities and SGA sponsored events. Parents are invited to attend evening workshops sponsored by the MCVSD Diversity Coaches on racial, gender, and LGBTQ issues. The PFSA invites staff

NBRS 2023 23NJ113PU Page 17 of 19

presenters to speak to families at their monthly meetings about contemporary issues facing students in and outside of the school environment. The school psychologist and the Student Assistance Coordinator facilitate workshops with students, teachers, and parents on the topics of vaping, substance abuse, and student mental health.

NBRS 2023 23NJ113PU Page 18 of 19

## PART VI - STRATEGY FOR EXCELLENCE

HTHS offers a theme-based education that prepares students for higher education and professional success in our evolving workforce. The college preparatory/honors program at High Technology High School provides exemplary learning experiences in areas of engineering, technology, and research. The HTHS community fosters a collaborative work environment where students, parents, faculty members and administrators work toward the common goal of providing a rigorous theme-based curriculum.

The first line in carrying out this practice lies in the strength of our curriculum. Our theme-based curricula are founded upon a current and relevant knowledge base. HTHS students are continually engaged in classroom projects with real-world applications. All HTHS students participate in a mentorship within a chosen thematic track in their senior year; they also receive a theme-based education through a variety of required and elective courses. Within each thematic area offered at our school, students are introduced to the theory and practice of the specific field. They are then tasked to complete assignments and projects both in school and in the community in order to apply what they learn to real-world situations. Students take the concepts they learn in class and are able to immediately use these skills in a real way. Graduates from HTHS successfully carry the themes they study in their professional careers and community leadership roles.

NBRS 2023 23NJ113PU Page 19 of 19