Thomas Jefferson High School for Science and Technology 2018 2019
A GOVERNORS REGIONAL SCHOOL FOR SCIENCE AND TECHNOLOGY
6560 BRADOCK ROAD, ALEXANDRIA, VIRGINIA 22312
PHONE 703-750-8300 | FAX 703-750-5010 | WEB tjhsst.fcps.edu

Unique Mission & Beliefs

MISSION STATEMENT
The mission of Thomas Jefferson High School for Science and Technology is to provide students a challenging learning environment focused on math, science, and technology, to inspire joy at the prospect of discovery, and to foster a culture of innovation based on ethical behavior and the shared interests of humanity.

BELIEFS STATEMENT
At Thomas Jefferson High School for Science and Technology, we believe:

1. Critical thinking and problem solving skills are vital in addressing the complex societal and ethical issues of our time.
2. Students learn best in a community where academic disciplines are integrated, fostering an appreciation of how they interact and form a whole.
3. Global interdependence compels us to understand the languages, systems and diverse cultures of people throughout the world.
4. Literature, music and the arts are essential, timeless aspects of human existence.
5. The methods of science provide discipline to our search for structure in the world.
6. Research stems from a combination of fundamental knowledge, individual creativity and curiosity.
7. Effective communication is often the only difference between a good idea and a successful initiative.
8. Collaborative learning, athletics, and extracurricular activities develop leadership and interpersonal skills.
9. Responsibility and integrity are core principles in the pursuit of excellence.
10. Learning never ends.

About Us

Ann Bonitatibus, Principal
Brandon Kosatka, Director of Student Services

Thomas Jefferson High School for Science and Technology (TJHSST) is the product of a partnership forged between the business community and Fairfax County Public Schools (FCPS) to improve education in science, mathematics, and technology. This unique FCPS school offers a comprehensive program that focuses on scientific, mathematical, and technological fields. The core skills and values infused throughout the curriculum emphasize and promote critical inquiry and research, problem solving skills, intellectual curiosity, and social responsibility. As the regional Governor’s School for Science and Technology in Northern Virginia, the school serves applicants from five participating school districts: Arlington, Fairfax, Loudoun, and Prince William counties, as well as Falls Church City. Of the 425 students in the Class of 2019, 160 are National Merit Semifinalists, and an additional 193 are National Merit Commended students.

Admissions

Through a competitive admissions process that selects students based upon their demonstrated aptitude and passion for studies in the scientific, mathematical, and technological fields, the TJHSST Admissions Office evaluates and considers prospective students’ admission test scores, academic achievement, personal essays, and teacher recommendations. Applications are reviewed by independent selection committees composed of school administrators, counselors, and teachers from schools within the participating school districts.

Each year, approximately 480 students are offered admission to the incoming 9th grade class. The Class of 2022 admissions cycle offered enrollment to 485 of 3160 applicants. Enrollment for the 2018-2019 school year is 1782 students.

Currently, our grade level distribution and enrollment are as follows:

9th Grade (Class of 2022) – 461 Students
10th Grade (Class of 2021) – 450 Students
11th Grade (Class of 2020) – 446 Students
12th Grade (Class of 2019) – 425 Students

Student Research

Since its very first graduating class in 1985, student research has played an essential role in learning at TJHSST. Requirements for the Thomas Jefferson High School Diploma include the completion of an original engineering or experimental research project in one of thirteen on-campus laboratories or off-site through a mentorship program at a corporate, government, or university research laboratory:

- Astronomy and Astrophysics
- Automation and Robotics
- Biotechnology
- Chemical Analysis and Nanochemistry
- Computer Systems
- Engineering Design
- Energy Systems
- Microelectronics
- Mobile & Web Application Development
- Neuroscience
- Oceanography/Geophysical Systems
- Quantum Physics and Optics
- Prototyping and Engineering Materials

Selected outstanding research projects are published in TJHSST’s annual student-produced research journal, TEKNOS, which has won numerous national awards.

Mentorship Program

Students in the TJHSST Mentorship Program are involved in research and/or project development at various mentoring agencies, including corporate, university, and government institutions, throughout the metropolitan Washington D.C. area. Students are supervised by mentors who are accomplished scientists, engineers and other technical professionals working at these agencies. The TJHSST Mentorship Program provides an alternative way for dedicated students to fulfill their required senior research project. Scientific laboratory mentorships are often comparable to university undergraduate research courses.

Mentoring agencies that support the TJHSST Mentorship Program include:
- Children’s National Medical Center
- The National Institutes of Health
- Walter Reed Army Institute of Research
- The MITRE Corporation
- Naval Research Laboratory
- George Mason University
- Georgetown University MedStar Rehabilitation Center
- Georgetown University
- George Washington University
- Setty & Associates, Inc., Metron, Inc., Uniformed Services University of the Health Sciences
- University of Maryland College Park
- United States Food and Drug Administration
- Haystax Technology Inc.
- Phone2Action, Inc.
- Preston Wealth Advisors

Embedded Activities Period

In addition to the seven academic periods, students are required to participate in an activities period that is included in the instructional day. Affectionately referred to as “8th period”, this additional class period of the day affords students the ability to seek out academic support and/or enrichment while also providing them the opportunity to participate in any of the over 150 clubs and activities exploring (but not limited to) diversity, academic competition, outreach, service, and more.

Accelerated Curriculum

The rigorous college preparatory curriculum provides students with the opportunity to achieve in all disciplines, with an emphasis on the sciences and the technology of applied sciences. All students are required to work toward a 26 credit Thomas Jefferson High School Diploma that parallels the Virginia state requirements for its Advanced Studies Diploma of 26 credits.
Accelerated Curriculum (cont.)

- English ........................................ 4
- Mathematics (not including Algebra 1; AP Calculus required) ............. 4
- Science (Biology, Chemistry, Physics, and Geosystems) .................. 4
- Social Studies .................................. 4
- World Language (in the same language) ................................. 3
- Health and Physical Education ........................................ 2
- Fine Arts/Sci-Tech Elective/Cultural Studies .............................. 2
- Science/Technology Research ........................................... 1
- Computer Science ........................................ 1
- Economics & Personal Finance ......................................... 1

- Weighting:

  **Honors courses are weighted with an additional 0.50 quality points.**
  **AP Courses receive an additional 1.0 weight for year-long courses.**
  **Selected post-AP courses (semester courses that require completion of an AP course prior to enrolling) receive additional weighting as well.**

**FCPS Grading Scale**

<table>
<thead>
<tr>
<th>Letter</th>
<th>Percent Range (4.0 Scale)</th>
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<tbody>
<tr>
<td><em>Excellent</em></td>
<td>A 93 – 100 (4.0)</td>
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<tr>
<td></td>
<td>A- 90 – 92 (3.7)</td>
</tr>
<tr>
<td></td>
<td>B+ 87 – 89 (3.3)</td>
</tr>
<tr>
<td><em>Above Average</em></td>
<td>B 83 – 86 (3.0)</td>
</tr>
<tr>
<td></td>
<td>B- 80 – 82 (2.7)</td>
</tr>
<tr>
<td></td>
<td>C+ 77 – 79 (2.3)</td>
</tr>
<tr>
<td><em>Average</em></td>
<td>C 73 – 76 (2.0)</td>
</tr>
<tr>
<td></td>
<td>C- 70 – 72 (1.7)</td>
</tr>
<tr>
<td></td>
<td>D+ 67 – 69 (1.3)</td>
</tr>
<tr>
<td><em>Below Average</em></td>
<td>D 64 – 66 (1.0)</td>
</tr>
<tr>
<td></td>
<td>F below 64 (0.0)</td>
</tr>
</tbody>
</table>

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**FCPS Profile:** [www.fcps.edu/about-fcps/postsecondaryprofile](http://www.fcps.edu/about-fcps/postsecondaryprofile)