

Innovative. Authentic. Student-Centered.

# TechValley

HIGH SCHOOL

You're invited to apply for fall 2017



For more information,  
please visit our website at  
[www.techvalleyhigh.org](http://www.techvalleyhigh.org).

**Tech Valley High School**  
246 Tricentennial Drive  
Albany, New York 12203

Phone: 518-862-4960  
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4 years

OF MATH AND SCIENCE

2+ years

OF MANDARIN CHINESE

20+

MONTHLY INTERACTIONS  
WITH PROFESSIONALS

PBL

PROJECT-BASED LEARNING

100+

PRESENTATIONS  
ACROSS FOUR YEARS

100

HOURS COMMUNITY  
SERVICE

[www.techvalleyhigh.org](http://www.techvalleyhigh.org)

# About Tech Valley High School



## QUICK TVHS FACTS...

- ▶ Tech Valley High School students receive a **well-rounded education** that includes art, technology, foreign language, service learning, experiential learning and physical education, in addition to core subjects.
- ▶ Students graduate having met and/or exceeded requirements for New York state Regents and/or Advanced Regents diplomas from their home districts.
- ▶ TVHS has a **typical student body** that mirrors those of students' home districts.
- ▶ The education at TVHS is enriched by the school's **partnerships with area businesses and higher education institutions**.
- ▶ TVHS is located on SUNY Polytechnic Institute's Albany Nanotech Complex, a **world-class global research and development center**.

Tech Valley High School is a regional public high school that is open to all students at no cost to parents. Students learn through hands-on projects that are based in authentic applications of New York state learning standards.

Located on the campus of SUNY Polytechnic Institute's Albany Nanotech Complex, TVHS is uniquely situated to provide access to technology resources and partnerships that students need to excel in the global economy. The school partners with businesses and higher education institutions throughout the region to incorporate true-to-life experiences into student learning. In the heart of the region's fast-growing technology sector, TVHS exposes students to aspects of the global economy and builds on its mission of developing 21st century skills while meeting New York state learning standards.

**A small school.** TVHS currently serves approximately 140 students across four grades.

**Free to all students.** TVHS is supported by area schools, businesses and the state.

**Hands-on.** Content in every class is taught through project-based learning that engages students in every facet of their education.

**Collaborative.** The majority of TVHS coursework is completed through a collaborative process that teaches students how to lead, manage and support team goals. TVHS students need to be open-minded and ready to work with business leaders, educators and other students in a professional, collaborative learning environment.

**Student-centered.** Students at TVHS take an active role in their own education. The control for learning is shifted from the passive style of teacher-directed learning, to the active style of student-engaged learning. In other words, students are more actively engaged in their own education.

**Built with partners.** Higher education and business partners volunteer on campus and in the field to host students for learning opportunities alongside experts.

**Technology-focused.** Every TVHS student is provided with a laptop and every classroom is equipped with wireless presentation technology.

# Project-based learning at TVHS

The distinctive environment at Tech Valley High School is centered on project-based learning. Students collaborate on meaningful projects that require critical thinking, creativity and communication to answer challenging questions or solve complex problems. By making learning relevant in this way, students see a purpose for mastering state-required skills and content concepts.

Students aren't just assessed on their understanding of academic content, but on their ability to successfully apply that content when solving authentic problems. This expands student learning by preparing them with work habits and character traits needed to succeed in life, college and careers.



TVHS students Cody Wason and Jeff Wood skim the Hudson River during a Bioengineering project about water quality.

## AUTHENTIC OPPORTUNITIES IN THE FIELD

Projects at Tech Valley High School integrate real-world scenarios and information wherever possible.

For example, in Bioengineering class, students are as likely to be found in the field gathering data, as they are in the classroom analyzing it.

Each year, students go to the Hudson River where they gather water samples to analyze against historic data collected by previous TVHS classes and other schools.



Students Austin Case and Kyle Sharpe explain revisions and modifications of their VEX robot to math teacher Michelle Sweeny at the expo.

## STUDENTS AS THE TEACHERS

Tech Valley High's education is centered on the students, who drive their own learning. In many cases, projects put students into the teacher's role.

All students participate in the annual TVHS Design Expo held at SUNY Polytechnic Institute's Zero Energy Nanotechnology Building. Students either create new projects or revise and polish projects they created earlier in the year.

All of the projects feature problems that were solved through the use of the engineering design process. Students present their work and explain the process to participants, including educators and members of the professional business community.



TVHS student Alexandra O'Keefe, right, with local meteorologist Paul Caiano. O'Keefe researched meteorology during her I-Term project.

## WORKPLACE EXPERIENCE WITH EXPERTS

All students at TVHS undertake an annual I-term project in February that allows them to study a potential career.

Freshmen and sophomores take on individual research projects that prepare them for their junior year, when they spend 15 to 25 hours working side-by-side with engineers, doctors, researchers, executives and other professionals.

I-term culminates with Senior Project, a long-term investigation into a career field in which they are interested. Seniors complete a two-week internship and create an authentic artifact and research paper.

## COLLEGE & CAREER SKILLS

TVHS focuses its curriculum on the skills students need to succeed in a global, ever-changing world. In addition to mastering New York state learning standards, TVHS graduates are:

- ▶ Informed technology users.
- ▶ Effective collaborators.
- ▶ Engaged and self-directed learners.
- ▶ Articulate and confident communicators.
- ▶ Global stewards and culturally aware citizens.

Students' grades reflect how well they are able to demonstrate these learning outcomes. In addition, students must complete 100 hours of community service in order to graduate.

## THE ROLE OF TECHNOLOGY

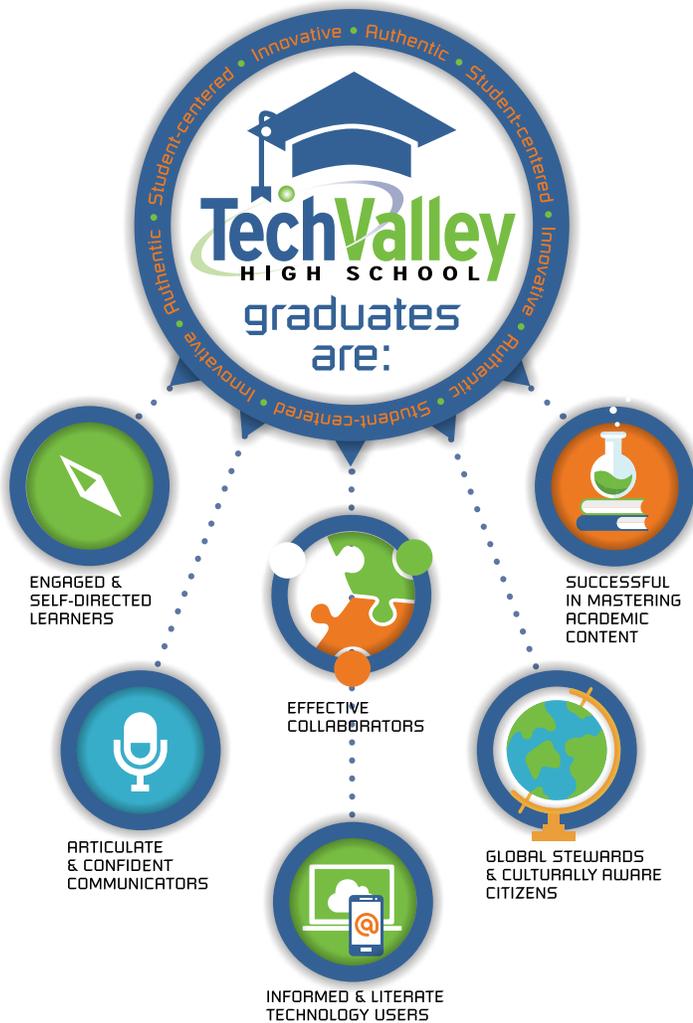
Students design, construct, use and evaluate appropriate technology that is seamlessly integrated into their everyday learning. They use electronics, software and programs to help them think critically about projects and problems. Students have an awareness and understanding of the region's emerging technologies, adapt to ever-changing platforms, and prepare for technology that does not yet exist.

## INTEGRATED CURRICULUM

At least one class per grade level integrates two courses. For example, Global Humanities is a course in freshman and sophomore years that integrates global history and English. Students also study biology and engineering in a course called Bioengineering. Eleventh-grade English and American history are combined in a course called Inventing America.



# Why choose TVHS?



## DID YOU KNOW?

- ▶ The project-based curriculum at TVHS meets all New York state learning standards.
- ▶ Interested students apply in eighth grade and are selected by lottery.
- ▶ TVHS draws from 45 public school districts of Questar III and Capital Region BOCES.
- ▶ All courses are considered honors-level courses.
- ▶ Clubs are formed and run by students based on their own interests. Students may also participate in sports, clubs, dances and other activities in their home districts.
- ▶ Nearly 50 percent of TVHS graduates pursue degrees in science, technology, engineering and math (STEM) fields, compared to 9 percent nationwide. STEM majors earn the highest starting salaries of any profession. Also, employment in STEM fields is projected to grow by 29 percent, adding 2.1 million new jobs through 2020.

**I would have given anything to get into a school like this.**

**– Apple co-founder Steve 'Woz' Wozniak**

## GRADING

Students are assessed by more than just a number or letter grade; they are evaluated based on self-direction, core content knowledge, collaboration, communication, self-direction and technology literacy. This system provides a full understanding of students' strengths and target areas for growth and gives parents and teachers guidance in tailoring each student's academic program.

## STUDIES SHOW ADOLESCENTS LEARN BEST WHEN THEY:

- ▶ Are faced with solving unforeseen problems and overcoming unpredicted obstacles.
- ▶ Work collaboratively on team-based projects.
- ▶ Take responsibility for their own learning.
- ▶ Understand how their learning fits into their futures.

## COLLEGE CREDITS

Earning college credits is strongly encouraged. Students can take college-equivalent classes at TVHS, enroll in online courses or attend classes at a nearby college.

## ADVISORIES

Daily mixed-grade advisories provide students with the opportunity to develop close relationships with a consistent group of 10 to 12 peers and a teacher. This teacher, who knows each student well, is the main contact for parents.

## COMMUNITY SERVICE

Community service is required to connect students to the world around them and provide them with an opportunity to learn important skills and ethics. Each student is required to complete 100 hours of community service in order to graduate.

Tech Valley High School, Questar III and the Capital Region BOCES do not discriminate on the basis of race, color, national origin, sex, disability, or age in programs, activities, employment, and admissions; and provide equal access to the Boy Scouts and other designated youth groups.

The following person has been designated to handle inquiries regarding the non-discrimination policies: Robert Zordan, compliance officer/coordinator, at robert.zordan@neric.org, (518) 862-4910 or 900 Watervliet-Shaker Road, Albany, NY 12205. Inquiries concerning the application of the Capital Region BOCES non-discrimination policies may also be referred to the U.S. Department of Education, Office for Civil Rights (OCR), 32 Old Slip, 26th Floor, New York, NY 10005, telephone (646) 428-3800 (voice) or (800) 877-8339 (TTY).