Kenmore-Town of Tonawanda UFSD

CAREERACADEMIES

Launching A Dynamic Edge on Your Future

ken·ton
ACADEMIES
Launching A Dynamic Edge on Your Future

Welcome

The Kenmore-Town of Tonawanda School District proudly provides opportunities for multiple pathways for our students in career and technical education (CTE) programs. Students are able to select from four Career Academies in the areas of Business, Pre-Engineering, Information Technology, and Computer Networking at both our high schools. Unlike other school districts, these CTE programs are credentialed by New York State, which means graduates will receive a Technical Endorsement on their diplomas. Ken-Ton students can take advantage of the state's new rigorous pathways to graduation gaining real life, hands-on workplace experience while being college ready as well.

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Technology Academies

Note from Academy Directors

The Kenmore-Tonawanda UFSD is proud to offer unique opportunities for all students through Academies and Career & Technical Education (CTE) programs. Five years ago the District's dedicated faculty and administration developed and instituted four new programs, providing students with an education opportunity that combines rigorous curriculum and state-of-the-art technology with an industry connection leading to a diploma endorsement. The CTE endorsement attests to each student's effort and achievement preparing for the future. These four new programs include: Pre-Engineering Academy, Virtual Enterprise & Finance Academy, Information Technology Academy, and Computer Networking Academy.

Working alongside professionals from business, industry, and secondary education, the faculty of the District's Business and Technology Education Departments created curriculum that affords students the opportunity to earn college credit while preparing for the demands of today's careers. This work included renewing and creating articulation agreements with the Rochester Institute of Technology (RIT), Erie Community College (ECC), and Buffalo State College. Academy graduates have a jump-start on plans for college, internships, and work, helping each student to be successful on the next step in life after graduation from Kenmore East or Kenmore West High Schools.

The technology used in business, industry, and education is ever-evolving. Through support from the Carl D. Perkins grant and the district, new technology has been infused into the curriculum and classrooms of each Academy program. Throughout this magazine you will see pictures of students working with 3D printers, Apple iPads, robotics, and CNC machines. Additionally, Academy and CTE students are able to participate in work-based learning, with field trips and internships with local businesses where today's technology can be seen in action.

Advisory boards are also an integral part of each Academy. Through the guidance of professionals from business, industry, and education, Career & Technical Education is supported through feedback that helps each program continue to grow. Many opportunities have evolved from the advisory boards including a professional speaker series and outstanding Internships for Academy students. A great deal of appreciation goes to the advisory boards for their dedication and perseverance in making these educational opportunities available to students.
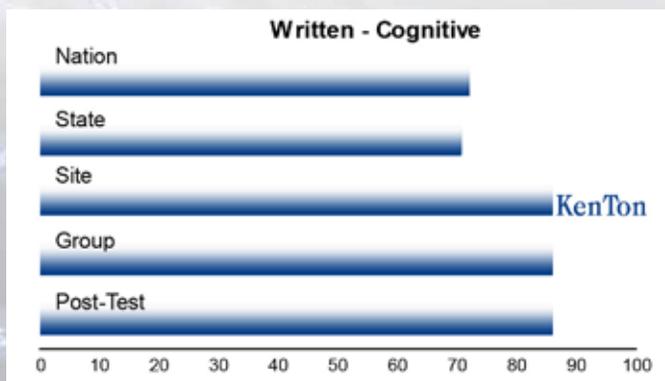
Ken-Ton Academy students score above state and national averages on industry standard assessment.

Finally, a special thank you goes to the Board of Education for their continued support of the Ken-Ton Academies.

Nancy Pray
Joel Maerten
Coordinators, Academy & CTE Education

Karen Novo
NFTA - Human Resource Director

I serve on the Virtual Enterprise & Finance Academy advisory board and I have been very impressed with the Academy offerings and the rigorous curriculum Ken-Ton has to offer in all of the Career Academies. The four Career Academies were created to prepare students for high-demand careers. As the Human Resource Director at NFTA, I encourage my hiring staff to look for candidates who demonstrate strong communication and team building skills. I have worked closely with Ken-Ton to build skills into the Academy curriculum that will prepare students for the real world and competitive jobs.

The Ken-Ton School district progressively created four Career Academies that will give students an edge in competing for high-demand jobs. They are building skills and experience that will provide them with hearty resumes for college and future careers.

The technology that students are able to work with is state-of-the-art. Students are gaining computer skills that are needed in the workplace. The world that we live in is advancing at rapid speed technologically and students who go through the Academies will gain an edge by staying up-to-date on current technological trends.

I am impressed that so many of the course offerings have college credit which will provide students a jump start on their post-secondary education. I encourage students to consider the Career Academies as they will provide an opportunity for college-level credits and an edge in high demand jobs of the future.

Karen Novo
NFTA - Human Resource Director

Buffalo NFTA

Dr. Ramona R. Santa Maria
Professor CIS Buffalo State

BUFFALO STATE
The State University of New York

The Ken-Ton Career Academies are a gem within the WNY area. With focused curriculum, and current technology students are learning on current trend technology tools, while preparing for college. So much of the equipment that is within the Ken-Ton Academies is at par to what I see within Higher Education giving students a leg up before they get to college. The Academy program teachers are industry experts who bring real-world knowledge to the classroom.

I have participated as an advisory board member on the Finance Academy and Information Technology Academy for the past 5-years. Through my position at Buffalo State, I work with many teachers in the area. I'm aware of a variety of competitive programs. When I compare Ken-Ton Career Academies to other programs, our students have a competitive edge within the WNY area. The Career Academies center on focused curriculum, using current technology where students learn on contemporary tools and equipment.

One of the greatest opportunities I see for Ken-Ton students is the chance to enroll in high school courses that articulate for college credit. The benefits for students' families is that the 3-credit course is an obtainable discounted rate . This financial savings has a long term benefit for families, while students get to experience college courses before they leave High School and earn college credit.

Furthermore, due to the effort of teachers who have written, and secured grant funding, computer labs are updated, students have experiences learning about 3-D tools, and learn on equipment similar to technology at Buffalo State, RIT and other higher educational institutions.


Lastly, when working with Academy program teachers, they are more than high school educators. Many own, or have previously worked in business and industry. They are experts inside of the classroom and recognized for their achievements in the community. Career Academy teachers bring real-world knowledge to the classroom.

If your child is interested in Business, Computers, Engineering or Networking the Ken-Ton Career Academies are programs parents and students should investigate. Students enrolling in Career Academies, and taking advantage of all the educational benefits, gain exposure and opportunity before they get to college.

I'm proud to be a Ken-Ton resident and endorse these premier programs.

Ramona R. Santa Maria
Associate Professor Coordinator, Computer Fundamentals
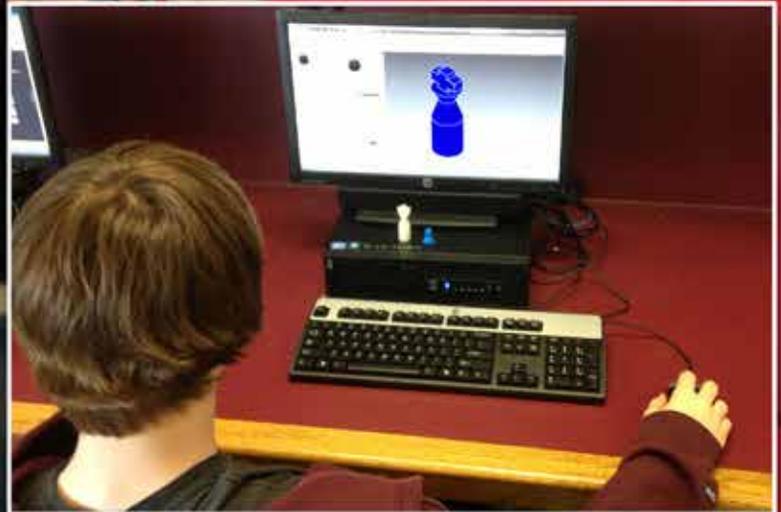
Buffalo State & College Credit

Pre-Engineering Academy

Students who participate in this career-preparation academy will be developing and learning the skills necessary to be successful in today's high-tech world. This program focuses on preparing students for a variety of careers that are (or will) be available to high school and college graduates in the coming years. This program follows the Project Lead the Way (PLTW) curriculum and also includes district developed courses.
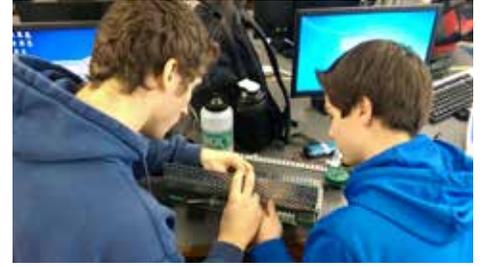
Who should be interested in the Pre-Engineering Academy?

Anyone interested in STEMS careers (Science, Technology, Engineering, & Mathematics)! ALL STUDENTS – male or female, motivated to be successful in post-secondary education and future careers. Students participating in the Pre-Engineering Academy may be interested in careers in a variety of areas including:

- *Engineering – Aerospace, Agricultural, Architectural, Chemical, Civil, Computer, Electrical,*
- *Environmental, Materials, Mechanical, Mining, Nuclear, Transportation, & other specialties*
- *Engineering technician careers in a wide variety of fields*
- *Life sciences including biomedical, biomechanical, & clinical engineering*
- *Computer Science – including hardware and software engineering, installation, and maintenance*
- *Industrial and manufacturing careers including electricity, electronics, automation, and robotics*
- *Skilled trades apprenticeships and training as electricians and other fields*
- *Architecture and related careers in construction design, planning, and management*
- *Technology management*
- *Secondary and post-secondary education*
- *Other science, technology, and mathematics related careers*
- *Military*

What courses are available to Pre-Engineering Academy students?

The following courses are available to Information Pre-Engineering Academy participants and any other student interested in exploring the rapidly-evolving world of technology:

Required Courses:
- *PLTW Intro to Engineering Design/DDP (PLTW IED/ DDP)*
- *PLTW Computer Integrated Manufacturing (PLTW CIM)*
- *PLTW Principles of Engineering (PLTW POE)*
- *PLTW Digital Electronics (PLTW DE)*
- *PLTW Engineering Design & Development (PLTW EDD)*
- *Architecture*

Electives:
- *Construction Systems*
- *Basic Electricity/Electronics*
- *AutoCAD & Advanced AutoCAD*
- *Tool Time (Manufacturing)*
- *Tool Time 2 (Materials)*
- *Media Design & Video Production*
- *Graphic Communications*
- *Networking 1 & 2 (Cisco Networking)*
- *PLTW Computer Science & Engineering (PLTW CSE)*

What are the advantages of participating in a CTE program?

CTE students participate in a unique sequence of study developed through a thorough planning process and approved by the Board of Education and the NYS Education Department. Pre-Engineering Academy graduates will receive a high school diploma endorsement indicating that they are prepared to pursue further education and employment in career fields related to: engineering, technology, science, and design in addition to Regents or Advanced Regents designation. Pre-Engineering Academy students are also eligible to receive integrated credit in mathematics and science, participate in work-based learning opportunities, and earn college level credit through agreements with post-secondary institutions including Rochester Institute of Technology (RIT) and E.C.C.

The Engineering Academy has reached out to various WNY technical professionals seeking advice and direction for its program. It conducts round table discussion on future needs and directions for the engineering-oriented student.

I have been invited to student technical presentations on the development of inventions for everyday use. The students had shown independent thinking in the development of their inventions, how personal/personnel and team dynamics work during project development, actual use of Power Point whereby the presentation was a team based activity and invited professionals were requested to evaluate each team's efforts on all these points.

At the middle school level (Herbert Hoover) professionals from various fields attended a job fair to provide the students an opportunity to discuss future opportunities in those fields, future directions, and various other formatted questions to provide them an opportunity to "interview" professionals and help them decide what direction the student should go in for their future careers.

The Ken-Ton Academies are a well-planned and thought out program for dedicated students to become involved with. I would highly recommend to those students to follow that path which will ensure their continued successes into their futures and a confident feeling they made the correct choice with the initial directions the Academies provide.

Stephen J. Golyski, PE, AVS - *NYS-licensed Professional Engineer | Associate Value Specialist (Value Engineer)*

Virtual Enterprise & Finance Academy

The mission of the Virtual Enterprise & Finance Academy is to provide students with a challenging, student-centered, project-based academic, business/financial and technology program. Students will be exposed to the global business world and will be inspired to become respectful and successful members of a continually evolving financial community. Students who participate in this career-preparation academy will be developing and learning the skills necessary to be successful in today's financial world. This program focuses on preparing students for a variety of careers that are (or will) be available to high school and college graduates in the coming years.

Who should be interested in the Virtual Enterprise & Finance Academy?

ALL STUDENTS – male or female, motivated to be successful in post-secondary education and future careers. Students participating in the Finance Academy may be interested in careers in a variety of areas including:

- *Finance*
- *Accounting*
- *Web Design*
- *Marketing*
- *Management*
- *Business*
- *Secondary and post-secondary education*
- *Military*

Benefits of participating in the Virtual Enterprise & Finance Academy:

- *Emphasis on academic excellence with specialized courses and classroom activities.*
- *An introduction to all facets of the financial services industry and exposure to current technology.*
- *Field trips to local area businesses to learn about careers, operations and workplace environment.*
- *Class projects that mirror real world events and tie in to the curriculum.*
- *Opportunity to earn college credits while in high school.*
- *Use of computers and cutting edge technology in the classroom to complete projects.*
- *Business partner mentoring, internships, and job shadowing.*
- *Enhanced opportunities for employment after graduation.*

What courses are available to Virtual Enterprise & Finance Academy students?

The following courses are available to Virtual Enterprise & Finance Academy participants and any other student interested in exploring the rapidly - evolving world of Finance and Technology:

Required Courses:
Financial Literacy • Virtual Enterprise • Business Law
Computers & The Internet • Computer Fundamentals
Accounting I • Web Design 1 & 2 • Internship

Electives:
Advanced Accounting • Personal Law Work Study
Business Math • Sports & Entertainment Marketing

Accounting and Business Law are part of the Virtual Enterprise & Finance Academy curriculum. I attended Canisius College where I pursued a degree in Accounting and the University at Buffalo where I pursued a Juris Doctorate. Accounting and Law are the foundations of any business and my experience in these fields is what led me to becoming the Chief Executive Officer of Buffalo Medical Group. I serve on the Virtual Enterprise & Finance Academy advisory board and I have been very impressed with the academy offerings and the rigorous curriculum Ken-Ton has to offer.

Dan Scully, *CEO of Buffalo Medical Group*

Academy Awards

CERTIFICATE OF RECOGNITION

This certificate is awarded to the

Kenmore-Town of Tonawanda Union Free School District

as a Western New York Emerging STEM School System

WNY STEM
Science Technology Engineering Math and the Arts

September 11, 2014

Facilitator
WNY STEM Hub

SIEMENS

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industry, Inc.

The Professional Association in Education

PDK
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Phi Delta Kappa International
Buffalo-Niagara Chapter 0047
2014 President's
School of Excellence Award
Presented To

Career Academies
Kenmore-Town of Tonawand
Union Free School District
Kenmore, New York

In Recognition and Appreciat
of
Establishing Unique Educational O
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Promoting Excellent Career Pr
Experiences For Secondary Sch

May 14, 2014

Hodgson Russ LLP
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Erie County
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Kenmore-Tonawanda UFSD

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Tonawanda, Unifrax, US Army Corps of Engineers, Bank of America
Lipuma Accounting Firm, Mayer Brothers, Proctor & Gamble, Town o
Youth Parks and Recreation, Buffalo Medical Group, NFTA, Sorrento C
Granite and Marble, UB School of Management, Buffalo State C
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THE BUFFALO NEWS

CITY & REGION

Tuesday, December 2, 2014

City & Region   Sports   Business   Opinion   Life & Arts   Gusto   Deaths

SEARCH

⌂ City & Region

Ken-Ton upgrades career ed for 21st century

Kenmore East teacher Alex Sowyrda works with students from left to right: Ja~, Georger, Jeff Landberg and Nick Basso in the Cisco Network Lab Station at th~

Mulville/Buffalo News

🐝 **Ken-Ton Bee**

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Print Edition

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2014-05-2~ | Education

Ken-Ton Career Academies recognized with awards

The Ken-Ton Career Academies, which began two years ago, will be recognized with two distinguished awards in the education community.

The Phi Delta Kappa Buffalo Niagara Chapter 0047 presented the Kenmore-Town of Tonawanda School District with the Distinguished School District Award in recognition of the Ken-Ton Career Academies program.

This award was presented at the PDK past president's award banquet, held recently at the Niagara Falls Country Club.

PDK International is a professional association for educators that brings together the top leaders, thinkers and doers to collaborate ~ inspire one another.

Students are pictured in the classroom of the IT Academy. They include Jessica Morey, front left, and Tyler Wisniewski, in the back row are A~ Fields and C.~

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Poll
Will you shop local this holiday season?
○ yes
○ No

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Career Academies honored for programs

STAFF REPORTS

The Ken-Ton Career Academies were recently recognized with the Distinguished School District award in recognition of their programs by the Phi Delta Kappa Buffalo-Niagara Chapter 0047 at its awards banquet at the Niagara Falls Country Club.

In addition, the Erie County Association of School Boards will present the Career Academies the Hodgson Russ award for excellence in Collabora-tion on June 12 at its 36th annual dinner at Salvatore's Italian Gardens.

"Our teachers, Nancy ~y and Joel Maerten, with ~ support of Superinten-~ Mark Mondanaro and ~istant superin-~m and

Robin Zymroz, left, assistant superintendent for instruction and student services and Nancy Pray, curriculum learning specialist, accept the Distinguished School District award in recognition of the Ken-Ton Career Academies program. The program, for students at Kenmore West and Kenmore East high schools, offers classes that include computer networking and technology, information technology, pre-engineering, and virtual enterprise and finance.

CONTRIBUTED PHOTO

~ful and relevant offer programs to students ~" Todd Pot-~KTT more West high schools ~ include computer net-~ technology,

at Kenmore East and Ken-more West and Kenmore East

information technology, pre-engineering, and vir-tual enterprise and finance. Courses are open to all students who may choose to take a class as an elective or opt to follow a sequence of study in their field of interest.

"We are completing our second cohort this year with just under 300 stu-dents enrolled in an acad-emy program," Maerten, curriculum learning spe-cialist, said.

Graduates of the acad-emy programs receive a Career and Technical Education endorsed high school diploma indicating that they are prepared to pursue further education and employment in their field of study.

Academy students are eligible to receive inte-grated credit, participate in work-based learning opportunities, and earn college credit through agreements with postsec-ondary institutions includ-

ing Buffalo State College, Erie Community College, and RIT.

Students enrolled in the program participate in a sequence of study devel-oped through a thorough planning process approv~ by the board of educati~ and the state departm~

A major compone~ to build relationships ~ local businesses ~ students may exp~ hands-on, real-wor~ cations based on w~ are taught in the cla~ Any business ~ in participating ~ gram may conta~ or 874-8403. Funding f~ Perkins Gra~ staff, curri~ ~ming equ~ment. Stude~ ~ learning~www~aca~874~85~

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Cisco Press
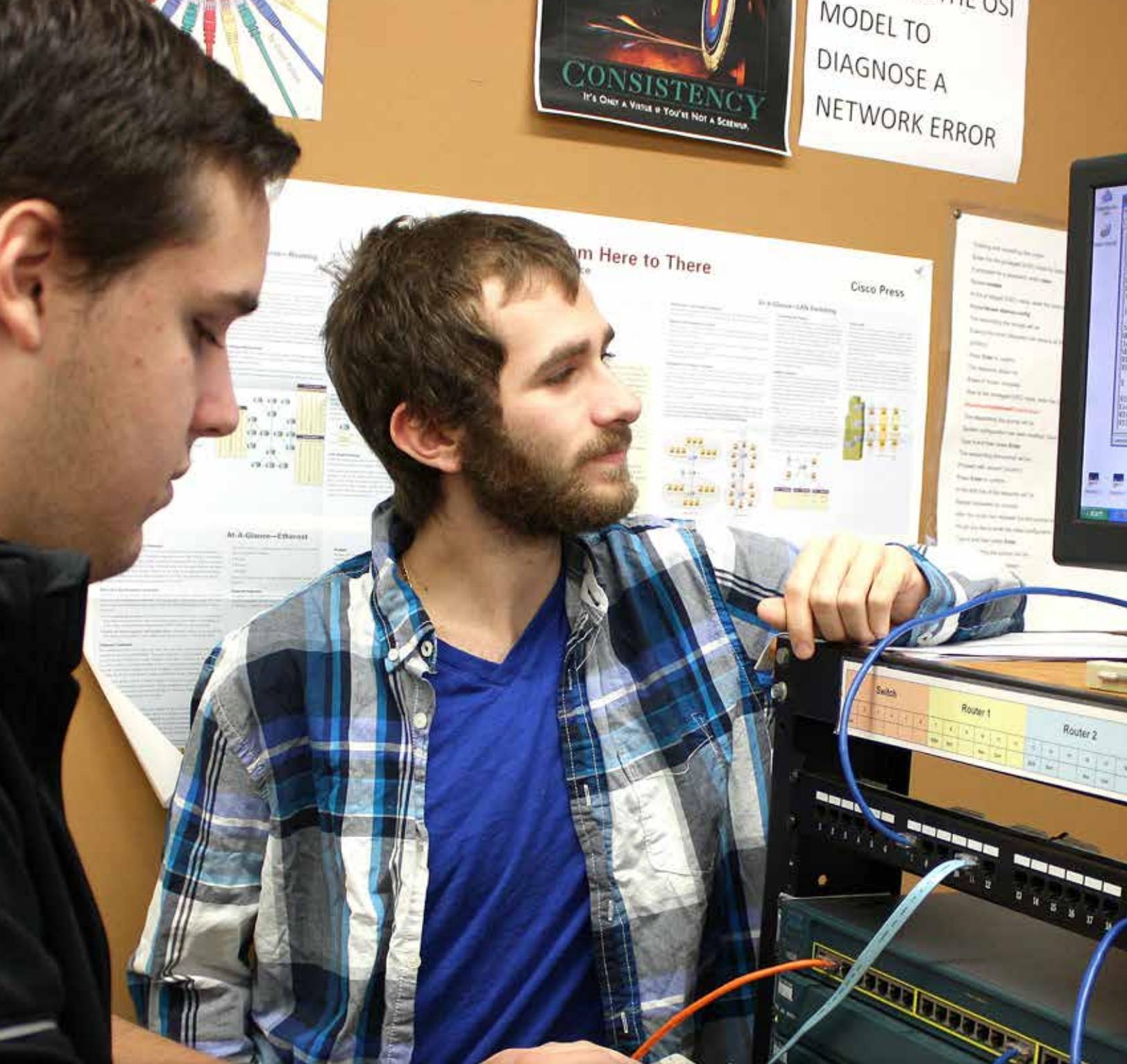
Computer Networking & Technology Academy

Students who participate in this career-preparation academy will be developing and learning the skills necessary to be successful in today's high-tech world. This program focuses on preparing students for a variety of careers that are (or will) be available to high school and college graduates in the coming years. This program prepares students to earn entry-level Cisco networking certification and includes courses developed by Project Lead the Way (PLTW) and Ken-Ton UFSD courses. (See: www.cisco.com and www.pltw.org for related information.)

Who should be interested in the CNT Academy?

Anyone interested in computer networking and technology careers. This program is open to all students motivated to prepare for high-tech careers of today and tomorrow. Program participants may pursue all types of careers including:

- *Computer network administrator, engineer, and installer*
- *Engineering and engineering technician including electrical and mechanical fields*
- *Computer system design, installation, and maintenance*
- *Computer science educators – secondary and post-secondary*
- *Computer hardware and software engineering*
- *Industrial and manufacturing careers including automation & robotics*
- *Electricity & electronics*
- *Technology management*
- *Modern technology-related careers that require on-the-job training*
- *Military*

What courses are available to Computer Networking & Technology Academy students?

The following courses are available to CNT Academy participants and any other student interested in exploring the rapidly-evolving world of technology:

Required Courses:
- *PLTW Introduction to Engineering Design / DDP (PLTW IED/DDP)*
- *PLTW Computer Integrated Manufacturing (PLTW CIM)*
- *PLTW Digital Electronics (PLTW DE)*
- *Networking 1 & 2 (Cisco Networking)*

- *PLTW Engineering Design and Development (PLTW EDD)*

Electives:
- *Basic Electricity/Electronics*
- *PLTW Principles of Engineering (PLTW POE)*
- *Architecture*
- *Construction Systems*
- *AutoCAD & Advanced AutoCAD*
- *Tool Time (Manufacturing)*
- *Tool Time 2 (Materials)*
- *Graphic Communications*
- *Media Design & Video Production*

## What are the advantages of participating in a CTE program?

Students enrolled in a CTE program are participating in a rigorous sequence of study that has been developed through a thorough planning process that has been approved by the Board of Education and the New York State Department of Education. Computer Networking & Technology CTE program completers will receive a high school diploma endorsement indicating that they are prepared to pursue further education and employment in career fields related to computers, engineering, technology, science, and design. Additionally, CTE program participants may earn integrated mathematics and science credit through a sequence of study in technology education.

The Ken-Ton students have access to a world-class hi-tech and business related curriculum that very few of their peers in other public or private schools have access to, and the programs are in high demand career tracks such as business and information technology.

The Ken-Ton Computer Networking & Technology Academy provides the right hands on training for students to be successful. Student are able to learn demanding Cisco Networking that can be the head start foundation to advanced college training, or head right into the workforce.

David Stinner
President - USitek
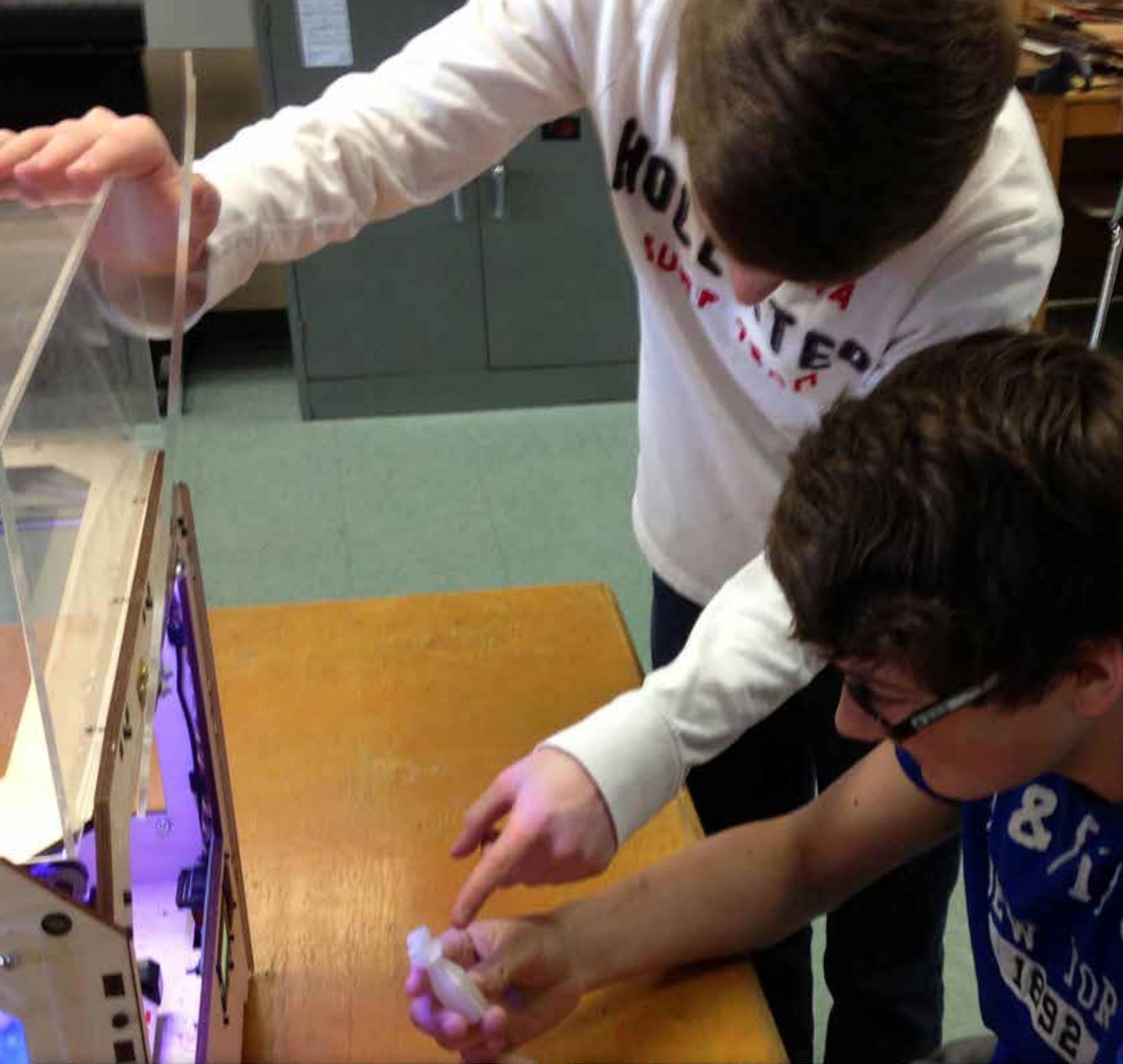
Information Technology Academy

We live in an information age – the collection, sorting, and processing of vast amounts of information is an important task in virtually any organization. Information Technology education includes the study of computer systems including computer hardware, software, and networking systems. Participants in the Information Technology Academy will develop and learn the skills necessary to be successful in today's high-tech world. This program focuses on preparing students for a variety of careers that are (or will in the future) be available to high school and college graduates in the coming years.

Who should be interested in the Information Technology Academy?

Anyone interested in information technology and related high-tech careers. Program participants may pursue all types of modern careers including:

- *Computer system design, installation, and maintenance*
- *Database administrator & computer systems analyst*
- *Computer hardware and software engineering*
- *Computer network administrator and installer*
- *Website designer*
- *Computer science educators – secondary and post-secondary*
- *Modern technology-related careers that require on-the-job training*
- *Military*

What courses are available to Information Technology Academy students?

The following courses are available to Information Technology Academy participants and any other student interested in exploring the rapidly-evolving world of technology:

Required Courses:
- *PLTW Intro to Engineering Design/DDP (PLTW IED/DDP)*
- *Networking 1 & 2 (Cisco Networking)*
- *Web Design 1 & 2*
- *Computers and the Internet*
- *Computer Fundamentals*
- *Basic Electricity/Electronics*
- *Media Design & Video Production*

Technology Education Electives:
- *PLTW Computer Integrated Manufacturing*
- *PLTW Principles of Engineering (POE)*
- *PLTW Digital Electronics (DE)*
- *Architecture*
- *Construction Systems*
- *AutoCAD & Advanced AutoCAD*
- *Tool Time & Tool Time 2*

Business Education Electives:
- *Graphic Communications*
- *Financial Literacy (CFM)*
- *Business Law*
- *Accounting & Advanced Accounting*
- *Personal Law*
- *Business Math*
- *Sports & Entertainment Marketing*

What are the advantages of participating in a CTE program?

Students enrolled in a CTE program are participating in a rigorous sequence of study that has been developed through a thorough planning process that has been approved by the Board of Education and the New York State Department of Education. Information Technology Academy CTE program completers will receive a high school diploma endorsement indicating that they are prepared to pursue further education and employment in career fields related to technology, information processing, mathematics, science, and computers. Also, CTE program participants may earn integrated mathematics, science, and/or social studies credit through a sequence of study in Career & Technical Education.

Our students today count on us to adequately prepare them for their adult lives. College and career pathways will look very different in the future. In fact many jobs are as of yet undefined. Therefore, today's educators must also teach students universal skill sets which will serve as a foundation for multiple careers and higher educational opportunities. Classroom instruction must include creative problem solving, innovative thinking, collaboration and highly developed communication skills. Students having the self confidence that they will prosper in multiple environments will give them an important edge as adults. I am so proud to be affiliated with our Career Academies in Ken Ton as they are serving our students with knowledge and experience to be successful adults.

Elaine Altman, *Director Kenmore Staff Development Center - Ken-Ton Schools*

Ken-Ton Academy Field Trips...

GOODYEAR DUNLOP

GOODYEAR DUNLOP

GOODYEAR DUNLOP

JET BOAT

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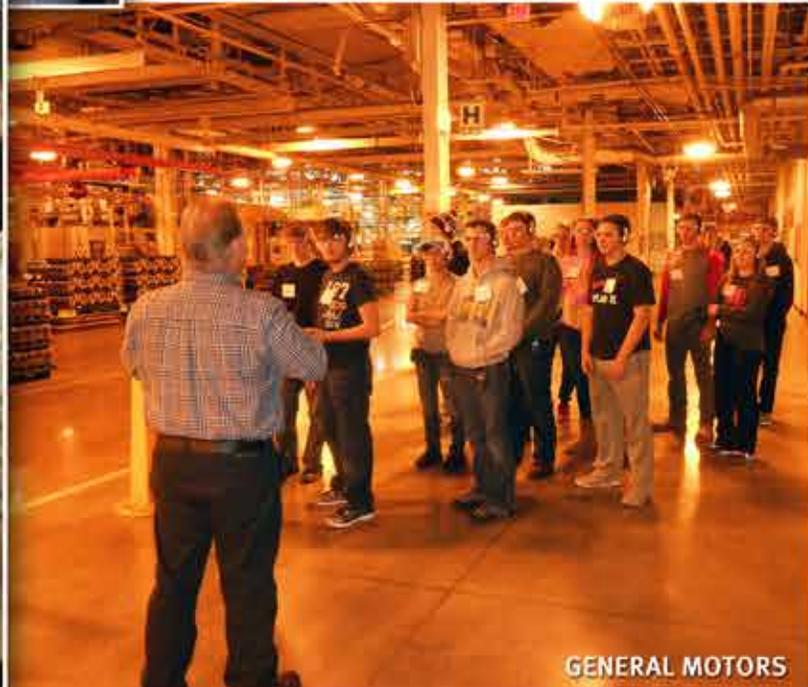
GENERAL MOTORS

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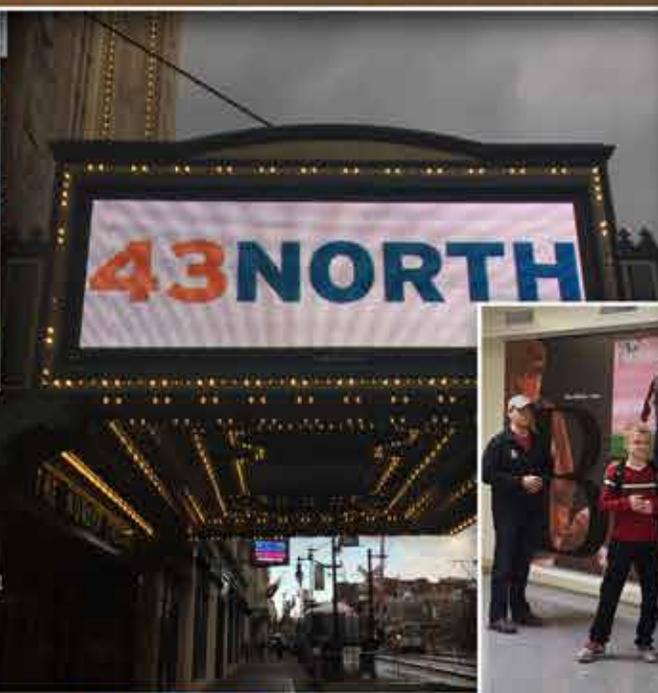
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BUFFALO STATE COLLEGE

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Great Opportunities

Heng Ta, AXA, Finance.

*I*nternships are offered at both Kenmore East and Kenmore West High Schools in the Academy programs as a capstone to the career pathway.

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Matthew Doverspike, USiteck, Computer Engineer.

Internships

Sign-Up Today!

See your counselor today to be part of an exciting opportunity!

ALL high school students may take advantage of
one of the district's four Career Academies:

Computer Networking & Technology Academy

Information Technology Academy

Pre-Engineering Academy

Virtual Enterprise & Finance Academy

All Academies are available at:
Kenmore East and Kenmore West High Schools

For more information on Academies, please visit our website at:
http://www.ktufsd.org/academies

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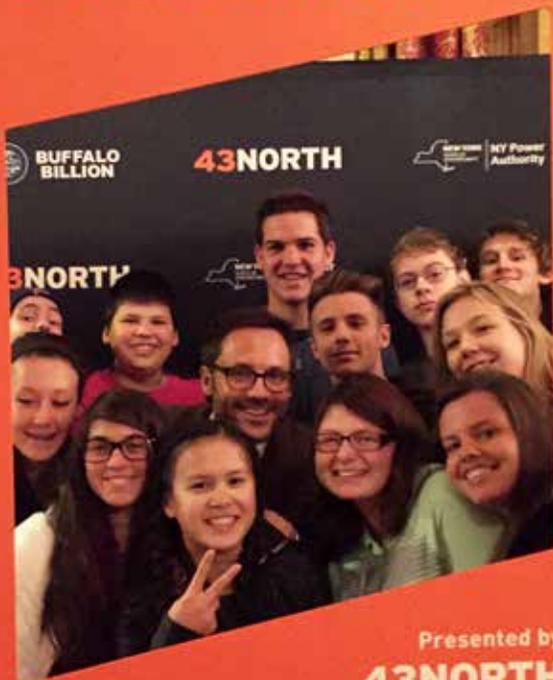
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