Connecticut Technical Education and Career System
EDUCATIONAL TECHNOLOGY PLAN

July 1, 2020 – June 30, 2023

Table of Contents

TECHNOLOGY PLANNING COMMITTEE

The Committee must:

- ***write a description of the technology committee's role in developing, implementing and evaluating the technology plan. This description should include how committee members were selected and the role each is expected to play. Tentative plans for scheduling meetings for the next school year should also be included;***

Technology Committee's Role

The Connecticut Technical Education and Career System (CTECS) District Technology Committee meets quarterly to monitor the vision, mission and standards established in the technology plan. The committee provides the advisory support necessary to meet the strategic goals and technology standards articulated in this plan. Committee membership requires individual expertise in curriculum areas, involvement in the school community (teachers, parents and students) and involvement in trade/technology committees. The committee is comprised of the district technology education consultant; district administrative staff, i.e. superintendent, assistant superintendent; district academic and trade/technology education consultants; school-based technology committee chairpersons; and Connecticut State Department of Education technology education consultants. The District Technology Committee is responsible for: (1) ensuring that technology is consciously integrated into all academic and trade/technology curricula; (2) establishing baseline technology expectations to transform traditional classrooms into technology rich learning environments (TLEs); (3) facilitating the development of technology skills of all CTECS students and staff; and (4) fostering the technology competence of CTECS stakeholders to be responsible citizens and lifelong learners.

To meet the demand for the integration of technology in all aspects of CTECS operations, each CTECS location has a school-based technology committee. This infrastructure supports the district technology planning committee and provides a conduit through which information on the needs of all CTECS stakeholders is communicated. The school-based technology committees provide a monitoring mechanism for all aspects of the district technology plan. These school-based technology committees meet monthly which enables timely, relevant feedback to the district technology planning committee. This feedback allows the district technology planning committee to meet the needs of all users and integrate the burgeoning changes in this ever changing technological culture.

A pivotal role of the school-based technology committees is to address the technology professional development needs of staff. The school-based technology committees are posited to meet the varying training needs of students and staff unique to their location. This "on-the-ground" approach facilitates the customization of technology workshops to support school-based initiatives and encourage participation in trainings that move users from a basic level of technology competence to more advanced technology skill sets.

The success of transforming traditional classrooms to technology rich learning environments requires the collaboration of the district technology planning committee and school-based technology committees. This collaboration ensures that the defined expectations for TLEs set forth in the district technology plan are realized in all CTECS locations. TLEs provide the infrastructure needed to ensure the accessibility of hardware, software, and technology resources for all relevant stakeholders. The articulation of TLE expectations also provides the monitoring structure needed for school-based technology committees to communicate the achievements and obstacles that meet CTECS stakeholders in the execution of the district technology plan.

To ensure the success of the CTECS Technology Plan, the District Technology Committee is a crucial component. Through their guidance, timely feedback, and support, this group of committed professionals guarantee that the Connecticut Technical Education and Career System promotes a culture that embraces technology.

District Technology Ad-Hoc Committee Members

Jeff Wihbey – Superintendent	Joe Campbell – Educational Technology Consultant
Julio Pena – English Instructor, Cheney THS	Don Mason – Information Technology Cluster Consultant
David Telesca – Principal, Platt THS	Michael Kaiser - Assistant Principal, Norwich THS
Kelly Martin – Media Specialist, Cheney THS	John Hatfield – Social Studies, Platt THS
Mike Altenburger – SPED, Vinal THS	Tonya Stoute – Professional Development Cons.

District Technology Committee At –Large Members

Jeff Wihbey - Superintendent	Richard Cavallaro – Assistant Superintendent, CTECS
Julio Pena – English Instructor, Wilcox THS	Joe Campbell – Educational Technology Consultant
David Telesca – Principal, Kaynor THS	Don Mason – IST DH, Wilcox THS
Kelly Martin – Media Specialist, Cheney THS	Michael Kaiser - Assistant Principal, Norwich THS
Mike Altenburger – SPED, Vinal THS	John Hatfield – Social Studies, Platt THS
Sally Markiewicz – Media Specialist – Abbott THS	James Mindek– CIO
Lee Pelletier – Electronics DH, Kaynor THS	Joe Hanlon – Welding Instructor – Bristol TEC
Tamra Roper – English Instructor, Wolcott THS	Rebecca Marra – SPED, Obrien THS
	Andrew Giannettino – Mechatronics DH, Platt THS
Sandeep Tibrewal – Math Instructor Bullard Havens	Fred Depietro – Electronics DH, Ellis THS
Greg Falla – Math Instructor, Goodwin THS	Shawn Carpenter – IST DH, Grasso THS
	Chris White – Science Instructor, Prince THS
	Thomas St. George – Media Specialist, Windham
Hank Weiner – Science Consultant	
Donna Wallace - Obloj – PE/Health Consultant	
James Mindek – CIO CTECS	Robin Fiumara – Central Office Fiscal

PROGRAM EVALUATION

The Committee must:

- ***describe the evaluation strategies (e.g., interviews, questionnaires, TLE observations, teacher-driven action research projects, analysis of student products or scores) that will be used to provide the data needed to address your evaluation questions;***

The Connecticut Technical Education and Career System (CTECS) has implemented infrastructures which support the integration and monitoring of technology-based activities throughout the district. Through the vision of the superintendent, a district initiative around the use of technology by all relevant stakeholders is an integral part of the mission of the CTECS. This initiative signals a commitment by the CTECS leadership to support technology-based activities and allocate the resources in order to ensure students receive the skills necessary to compete in a global economy. The CTECS has worked with a wide array of districts, Regional Education Service Centers (RESC) and CTECS schools to develop and implement meaningful processes for assessing the use technology throughout the district.

The CTECS Strategic Technology Plan details the requisite infrastructures in order to facilitate the use of technology and to monitor all technology-based activities in a planned, on-going, and systematic manner throughout the district. These infrastructures, i.e. curriculum integration; professional development; equitable use of technology; and communication structures are delineated in the CTECS Strategic Technology Plan with detailed descriptions of the mechanisms to monitor each of these critical elements. The CTECS Strategic Technology Plan is overseen by the District Educational Technology Consultant (DETC) under the supervision of the superintendent. The DETC is responsible for providing assistance and guidance in the implementation of technology-based activities by relevant stakeholders on the district and school levels; evaluate technology-based activities; and provide leadership in the acquisition of technology.

In order to promote the use of technology and develop capacity, school-based technology committees are in place throughout the district. These committees are the catalyst for executing the technology evaluation. The school-based committees receive direction and information from the district-based committee regarding technology-based activities. This communication structure is integral for providing feedback to the district on the implementation of the plan as well as to articulate the technology literacy needs of students and staff. Additionally, the school-based committee directly communicates with the professional development committee (an existing district infrastructure) to articulate the technology skill training(s) needed in each CTECS school. The professional development evaluations are an essential data point that provides the district committee a timely snapshot of the outcomes of technology trainings in the CTECS.

The district has spent a significant amount of time and resources developing specific technology-based needs assessment to monitor progress. The needs assessments are located in the appendices of this plan. The subsequent actions are also listed in those sections. Listed throughout the plan are the items which utilize the needs assessment results.

Located in the optional reporting - Appendix, C, D, F, G, H, I, J, K, L

VISION STATEMENT

To be the best Technical High School System in the United States

MISSION

The mission of the Connecticut Technical Education and Career System is to provide a world class, unique and rigorous learning environment for high school and adult learners that:

- Ensures both student academic success and career and technical education mastery, as well as, promotes enthusiasm for lifelong learning;
- Prepares students for post-secondary education, including apprenticeships and immediate productive employment
- Engages regional , state , national and international employers and industries in a vibrant collaboration to respond to current, emerging, and changing global workforce needs and expectations; and
- Pursues and participates in global partnerships that provide CTECS students with international exposure and experience

The purpose of the Connecticut Technical Education and Career System's (CTECS) district technology plan is to improve learning by providing technology that can be accessed and used by all members of the school community. The *CTECS Technology Plan* details the goals and actions needed to ensure student learning through the:

- integration of technology across the curricula;
- development of Technology Learning Environments (TLEs);
- delivery of professional growth opportunities;
- development of community partnerships.

This technology plan is a framework that aligns to state and national standards while offering technological opportunities (i.e., training) for teachers, administrators, students, parents, and the community. The goal of this plan is to develop capacity and define infrastructures that ensure meaningful learning opportunities for students; to develop the skill s of staff in the use of the newest technologies; and to provide the leadership necessary for meaningful school-based change.

The CTECS embraces the integration of technology into all content areas in order to realize the district's mission statement. The trade/technology and academic curricula has embedded technology skills for teachers to use in delivering the curricula thus creating Technology Learning Environments (TLEs). TLEs are not a stand-alone initiative, but rather a tool to deliver instruction. TLEs embed technology performance outcomes into student performance indicators in each instructional area. All instructional areas have defined the technology tools necessary to support the TLEs which may include but is not limited to: relevant software and appropriate hardware for student and staff use; teacher instructional resources; peripherals; and suggested classroom configurations. All academic and trade/technology programs have articulated TLEs aligned to the *CTECS Technology Plan* (See Appendix A - *Technology Learning Environments*).

Technology professional development offerings are provided to all staff. Workshops are scheduled throughout the year to meet the on-going demands of an ever changing technological environment. The staff is encouraged to participate in workshops to support student learning and their own professional development goals. Participants in trainings and workshops are required to complete a post evaluation. This professional development evaluation tool provides valuable data to the district technology education consultant, district technology committee, professional development committees (district and school-based) and administration (district and school-based) to monitor and adjust the *CTECS Technology Plan* as needed for success.

A key component in the *CTECS Technology Plan* is the development of community partnerships. The CTECS has an infrastructure in place to assist the district technology education consultant, technology committees (district and school-based), professional development committees (district and school-based) and administration in: setting goals; monitoring trends in business and industry through the collaboration of schools and their Trade/Technology Advisory Committees* (CTEAC's); allocating resources; and technical support for the district.

**The Trade/Technology Advisory Committee (CTEAC) membership includes teachers, parents, business/industry representatives, and community representatives. These committees meet throughout the school year and provide direct input and feedback on all aspects of CTECS curricula, technology and equipment needs.*

NEEDS ASSESSMENT: Curriculum Integration

When evaluating your needs, consider:

- ***Current curriculum strengths and weaknesses and the process used to determine these strengths and weaknesses;***

Curriculum Integration

The CTECS evaluates district curricula through an on-going review process. The review process examines the following data points which may include but are limited to: national technology standards; state technology standards; high stakes assessments; state assessment data; faculty and administrative surveys; observation notes; steering committee agendas/minutes; and department agendas/minutes. The review process was conducted to examine the integration of technology within existing CTECS curricula.

Strengths:

- The district has made significant improvement in the development and implementation of common curricula structures across the entire district;
- All CTECS academic and trade/technology curricula are aligned with state and national content standards and frameworks;
- All CTECS academic and trade/technology curricula incorporate technology applications skills and related activities to ensure content mastery;
- All core academic areas (English, Science, Social Studies, etc.) have been designing lessons and units which seamlessly integrate technology;
- The use of technology in the trade/technology (i.e. graphics, plumbing, automotive, etc.) areas is inherent to their program composition;
- High stakes trade/technology assessment standards are embedded in each trade technology curriculum;
- High stakes trade/technology assessments are administered to all grade 12 students annually;
- and the district is in a continuous mode of curriculum review based on the district's 5 year curriculum cycle.

Weaknesses:

- The district needs to embed the use of technology tools as an instructional resources in all curricular documents;
- The district needs to restructure the data collection process in order to review qualitative and quantitative data examining technology effectiveness;
- The district needs to restructure the distribution of technology, i.e. software and hardware to assist the delivery of trade/ technology standards;
- The district needs to monitor the equitable access of technology in all academic and trade/technology learning environments and adjust as needed;
- and the district's curricula needs to embed common technology-related lessons and subsequent performance assessments all academic and trade/technology instructional areas.

When evaluating your needs, consider:
How curriculum strategies are aligned to state standards;

During the curriculum revision cycle process, all program standards, learning outcomes, pacing guides, assessments are reviewed. Any necessary changes are made to ensure alignment to state standards; curriculum frameworks; identified power standards; pre and post-tests; and formative assessments. The curriculum strategies or instructional strategies implemented are tightly woven throughout all curricula to reflect differentiated instruction as required by Scientifically Research Based Interventions (SRBI).

When evaluating your needs, consider:
The current procedures for using technology to address any perceived curriculum weaknesses;

At this time, the district has not yet developed procedures for using technology to address any perceived weaknesses in curricula. Currently, all academic and trade/technology content areas administer required district-wide assessments to all students. The administration of these district-wide assessments occurs at the school level and varies by content area. The results of the district-wide trimester assessments are reported in PowerSchool and disseminated to all academic and trade/technology education consultants. Analysis of these assessments at the district level has raised concerns about the fidelity of results due to the variables affecting administration, i.e. test security, implementation, scheduling, etc. Thus, use of district-wide trimester assessment data to examine the efficacy of the corresponding programs is discouraged due to the unreliability of results. The district is currently examining how to utilize this data; revise district-wide trimester assessment guidelines; ensure test security; and align assessment test items to each content area's powered standards.

When evaluating your needs, consider:
How teachers integrate technology into their lessons - including ways technology is presently used for entire TLE and for small group instruction;

How students use technology - including ways students presently use technology for purposes beyond practice of skills.

There are a variety of opportunities within the academic and trade/technology curricula* to integrate technology concepts and applications. Ensuring access to various instructional technologies within their classroom enables teachers to embed technology concepts into their lessons. As set forth in the previous district technology plan, CTECS has begun transforming traditional classrooms to Technology Rich Learning Environments (TLEs). By ensuring that classrooms have technology available, teachers and students are able to have access to resources that will support the acquisition of 21st Century Learning Skills and ensure students have the technology skills necessary to enter the workforce.

An additional benefit of TLEs is that it allows for whole and small group instruction; allowing teachers to utilize technology to enhance student learning. TLEs enable teachers to move beyond using conventional instructional resources such as textbooks to providing students invaluable technology rich learning experiences to bring the world into their classrooms. The current district technology plan continues this initiative in all CTECS schools to ensure that all students have access to TLEs including the Library/Media Center. Every CTECS location has a Library/Media Center with research tools, technology (for use in and out of school), and instructional resources that support all curricula as well as the development of 21st Century Learning Skills.

*The following table on page 17 provides a list of all CTECS TLEs. Detailed descriptions of the above TLEs are provided in Appendix A.

CONNECTICUT TECHNICAL EDUCATION AND CAREER SYSTEM – TECHNOLOGY RICH LEARNING ENVIRONMENTS (TLEs)	
Academics	
Art	Mathematics
Computer Education/Computer Applications	Mathematics Literacy Lab
English	Physical education
English Literacy Lab	Science (Biology, Chemistry, Physics, etc)
Health Education	Social Studies
Library/Media Center	
Trade/Technologies	
Architectural Technologies	Graphics Technology
Automated Manufacturing Technology	Hairdressing and Barbering
Automotive Collision Repair and Refinishing	Health Technology
Automotive Technology	Heating, Ventilation and Air Conditioning (HVAC)
Baking	Information Systems Technology
Bioscience and Environmental Technology	Manufacturing Technology
Carpentry	Marketing, Management and Entrepreneurship
Computer Aided Drafting and Design	Masonry
Culinary Arts	Media Production
Diesel and Heavy Duty Equipment Repair	Music Production and Technical Theatre
Early Care and Education	Plumbing and Heating
Electrical	Plumbing, Heating and Cooling
Electromechanical Technology	Pre-Electrical Engineering and Audio Visual Technology
Electronics Technology	Tourism, Hospitality and Guest Services Management
Fashion Merchandising and Entrepreneurship	Welding and Metal Fabrication
Adult Education	
Aviation Maintenance Technician	Medical Assistant
Certified Nurse Assistant	Licensed Practical Nurse Program
Dental Assistant	Surgical Technician

Due to the inconsistent funding for technology in the district, the distribution of technology has been sporadic; thus effecting equity of access to technology. Although the conversion of traditional classrooms to TLEs is progressing, all CTECS Library/Media Center TLEs are equipped with technology resources accessible to all students and staff. The Library/Media Center TLE now acts as a technological hub during the roll-out of the remaining academic and trade/technology TLEs ensuring students have access to technology. The District Educational Technology Consultant (DETC) is working with the Network Administrator, Academic and Trade/Technology education consultants to re-evaluate program resources and develop a comprehensive plan for the equitable distribution of resources until funding for technology is restored to the annual operating budget.

In order to determine how to meet the needs of students, the District Technology Committee developed four guiding questions to provide direction. The committee requires that these questions be answered when setting the technology priorities. These guiding questions ask: (1) What kinds of information technologies do students use, and what are their preferences? (2) With what levels of skill are they using these technologies? (3)How does this use of technology

contribute to their educational experience? and (4) What value does the use of information technology add in terms of student achievement? Answers to these questions inform the District Technology Committee's recommendations and ensures that the district technology plan responds to the needs of students and the ever changing technological culture.

The District Technology Committee conducted a review of technology usage in the district that revealed students and staff employed technology for: (As identified in the Speak Up Surveys in Appendix F, G, H , I , J , K)

- TLE activities and studying using an electronic device
- Writing documents (word processing)
- Surfing the Internet for pleasure
- Creating, reading, sending e-mail
- Chatting with friends or acquaintances using instant messaging
- Using an electronic device (computer, EReader, ITouches, IPads, etc) at your place of employment
- Downloading or listening to music or videos/DVDs
- Completing a learning activity or accessing information for a course using course management systems
- Using library resources to complete a class assignment
- Playing computer games
- Creating spreadsheets or charts
- Creating presentations
- Creating graphics
- Creating Web pages
- Using Wiki's
- Creating or using Podcasts

Beyond student use of technology outside the classroom, academic TLEs employ the use of technology skills for basic application of technology concepts. The technology skills learned in the academic TLEs support the acquisition of 21st Century Learning Skills. The academic TLEs have been outfitted with technology equipment/hardware/software support the delivery of the instruction and assessment to ensure 21st Century Learning Skill learning opportunities. Student proximity to these technologies is critical for skill acquisition.

Beyond student use of technology outside the classroom, trade/technology TLEs employ the use of technology skills that far exceed basic application of technology concepts. The skills learned in the trade/technology TLEs are career oriented. All trade/technology TLEs require specific technology in order to implement those programs. The trade/technology TLEs have been outfitted with technology equipment/hardware/software critical to the delivery of the specific trade curricula. Student proximity to these technologies is critical for advanced skill acquisition.

Detailed descriptions of the academic and trade/technology TLEs are outlined in the Appendix A. Required for the academic and trade/technology TLEs are detailed in the sections – Appendix A: pages 73- 111.

NEEDS ASSESSMENT: Professional Development

Professional Development

When evaluating your needs, consider:

the process the LEA uses for assessing the technology professional development needs of teachers, administrators and noncertified staff;

CTECS Technology Needs Assessment is administered to staff bi-annually. The Technology Needs Assessment correlates to the International Society for Technology in Education (ISTE) standards as well as the state standards for information technology. The Needs Assessment is divided into four main categories: creating the environment for learning; creating learning environments/experiences; productivity and professional practice; social, legal, ethical and human issues. Staff responses are ranked in three (3) categories: initial, developing, and proficient. The results of this assessment are used by the District Technology Committee and the District Professional Development Committee to identify areas of growth and the need for additional training on specific technology topics.

CTECS Technology Needs Assessment Results			
I. CREATING THE ENVIRONMENT FOR LEARNING	**INITIAL**	**DEVELOPING**	**PROFICIENT**
A. DEMONSTRATE AN UNDERSTANDING OF RESEARCH AND POTENTIAL APPLICATIONS OF EDUCATIONAL TECHNOLOGY IN LEARNING.	18%	44.2%	37.8%
B. APPLY PROBLEM SOLVING STRATEGIES TO ISSUES INVOLVING TEACHING AND LEARNING WITH TECHNOLOGY.	17.9%	47.5%	34.6%
C. DEMONSTRATE AN UNDERSTANDING OF NETWORK CAPABILITIES AND ELECTRONIC COMMUNICATIONS.	40.8%	38.6%	20.6%
D. DEMONSTRATE AN UNDERSTANDING OF EMERGING TECHNOLOGIES.	29.2%	46.1%	24.6%
II. CREATING LEARNING ENVIRONMENTS & EXPERIENCES	**INITIAL**	**DEVELOPING**	**PROFICIENT**
A. TEACHERS WILL CREATE LEARNING EXPERIENCES THAT ALIGN WITH DISTRICT AND STATE CONTENT STANDARDS.	18.8%	51.8%	29.4%
B. TEACHERS WILL CREATE NEW LEARNING ENVIRONMENTS AND DEVELOP NEW ROLES OF TEACHER AND LEARNER.	25.8%	45.7%	28.5%
C. TEACHERS WILL USE TECHNOLOGY RESOURCES TO BETTER ASSESS AND UNDERSTAND STUDENTS' NEEDS AND ABILITIES IN ORDER TO IMPROVE INSTRUCTIONAL PRACTICE AND MAXIMIZE STUDENT LEARNING.	29.7%	38.2%	32.1%
D. TEACHERS WILL USE TECHNOLOGIES TO PROVIDE INDIVIDUALIZED INSTRUCTION TO SUPPORT STUDENTS' NEEDS.	32.6%	39.3%	28%
III. PRODUCTIVITY AND PROFESSIONAL PRACTICE	**INITIAL**	**DEVELOPING**	**PROFICIENT**
A. TEACHERS WILL USE EDUCATIONAL TECHNOLOGY TO COMMUNICATE/COLLABORATE WITH STUDENTS, PARENTS, AND TEACHERS.	34.1%	39.6%	26.2%
B. TEACHERS WILL USE ONLINE RESOURCES TO COMMUNICATE/COLLABORATE WITH THE SCHOOL COMMUNITY AND THE GLOBAL COMMUNITY.	28.8%	37.7%	33.4%
C. TEACHERS WILL USE TECHNOLOGY TO COLLECT AND MANAGE DATA RELATED TO TEACHING AND LEARNING.	37.2%	35.9%	26.9%
D. TEACHERS WILL REFLECT ON CURRENT PRACTICES, ARTICULATE GOALS, AND DEVELOP STRATEGIES TO IMPROVE UNDERSTANDING OF EDUCATIONAL TECHNOLOGY AND FURTHER THE INTEGRATION OF TECHNOLOGY INTO THE TLE.	37.9%	39.8%	22.3%
IV. SOCIAL, LEGAL, ETHICAL AND HUMAN ISSUES	**INITIAL**	**DEVELOPING**	**PROFICIENT**
A. TEACHERS WILL UNDERSTAND, MODEL, AND TEACH THE LEGAL AND ETHICAL PRACTICES REGARDING INFORMATION AND EDUCATIONAL TECHNOLOGY.	21.1%	56.3%	22.6%
B. TEACHERS WILL MODEL AND TEACH SAFE, HEALTHY PRACTICES OF TECHNOLOGY USE.	23%	45.1%	31.9%

When evaluating your needs, consider:
the technology professional development activities that have been offered to teachers;

Currently, professional development classes are offered to staff in the district. Classes are scheduled at different times of the day and on different days of the week to encourage participation. Initially, courses were offered at four (4) levels: initial, intermediate, developing and proficient. As staff becomes increasingly proficient, the district will tailor its offerings to staff based on building needs.

A sampling of classes that have been offered in CTECS:

Connecticut Technical High School Technology Professional Development Offerings		
3D Design	Inspiration	Renaissance Math
Acuity - Online Admissions Test	Integrating Technology into the TLE	Renaissance Reading
Adobe® Content Server5	Intel: Teach to the Future	Renaissance Responders
Advanced Query	Intro to Assistive Technology	Residential Systems
Apple IPod Training	Lectra/3D	Server 2008
Assistive Technology	Lexia	SmartBoards
AutoCad	Microsoft Office 2010	
Automating and integrating	Microsoft Publisher	Test Creation
Avionics	Mimio	Utilizing Flip Camera into instruction
Clarity	Modaris Pattern Design	Web 2.0
Computer Graphics/ Art	Moodle	Wikis Blogs and More
Destiny®	Networking Systems	Windows 7.0
Discovery Education	NOCTI test Generator	Wireless Integration
EBSCO	Online Tutorials	WYNN to Voice
Eportfolios	Powerit® - Teacher Websites	Movie Maker
Esysco	PowerSchool	Google Apps For Education
Feeman	Scheduling – District	
Geometers SketchPad	PowerSchool Mass Scheduling - School Administrative Team	
Google Docs	PowerSchool Mass Scheduling – School Clerical	
Green Globs	PowerTeacher	
HTML	ProbeWare	

When evaluating your needs, consider:
and how the effectiveness of the professional development activities will be assessed.

The District Professional Development Committee requires that all CTECS staff complete a post evaluation for all professional development activities. All technology professional development offerings and subsequent evaluations address the CTECS Staff Technology Standards. These standards are defined in Appendix B. The data gathered from these post evaluations enable the committee to monitor progress on all district initiative workshops/trainings. These post evaluations also inform the District Professional Development Committee in offering additional professional development opportunities that support 21st Century Learning Skills; align to the district and school-level improvement plans; and the district technology plan. The District Professional Development Committee communicates post evaluation results of technology professional development activities to the District Technology Committee. This feedback enables both district and school-level committees to prioritize offerings and ensure access to relevant training for all CTECS stakeholders.

NEEDS ASSESSMENT: Equitable Use of Educational Technology

Equitable Use of Educational Technology

When evaluating your needs, consider:

- ***the availability of technology to students and staff in the district – all students should have equal access to the technology;***
- ***the amount of time available for the use of technology by students and staff; and***

The following matrix may be used to determine the extent technology is available to staff.

Please include information about the type and availability of staff access both on and off campus.	
Administrators	Each administrator has a computer workstation, mobile device if they choose, and a laptop. All devices are connected to the network and have access to the LAN and WAN.
Teachers (preschool)	N/A
Teachers	All TLEs have a teacher computer workstation. Academic TLEs have technology available, i.e. SmartBoards, LCD projectors, etc. Every school has a computer lab. Some school have Library Library/Media Center with computers available for teacher use. Additionally, the Library Library/Media Center loans laptops, projectors, digital cameras, video cameras, as well as, IPADs , laptops and Chromebooks. Additionally, the district is deploying Chromebooks to all instructional staff in a revolving deployment. The district is in the process of fully implementing the TLE model.
Noncertified staff	All classrooms have computer workstations. Computer labs exist in every school in the district. Library Media Centers have computers available for staff to utilize. If the Non-certified staff have a specific role in which they require technology resources to complete their task they are equipped with such.

T**he following matrix may be used to determine the extent technology is available to students**.

Please include information about availability in TLEs, the library-Library/Media Center and all other areas where students have access. Mention the extent of supervised access before and after school.	
Students (preschool)	NA
Students (elementary)	NA
Students (middle school)	NA
Students (high school)	Beginning with the 2018-2019 School the CTECS has become a complete 1 to 1 school district. Each student in the district is provided a chromebook for their educational experience at the CTECS. In addition, Every school has a computer lab (including labs dedicated to language arts and mathematics instruction), chromebook carts as well as a Library Library/Media Center with computers available for student use. Additionally, the Library Library/Media Center loans laptops, projectors, digital cameras, video cameras. Equipment is available for student use outside of the building. All trade/technology TLEs have specific technology available in order to meet program needs.

Students **(with disabilities)**	Students with disabilities have access to technology based on their IEP's and other accommodations. The CTECS believes in the inclusion model, which incorporates Universal Design. The distribution of technology focuses on the supportive equipment/software that enables these students to access academic and trade/technology programs. All students are provided a chromebook loaded with all of the appropriate assistive technology applications. If this devices does not meet their needs and the student is in need of additional/different hardware and software those items are then provided based on student's IEP.

When evaluating your needs, consider:

- ***a description of the types of assistive technology tools that are provided for students with disabilities where necessary/applicable.***

In accordance with IDEA 2004 federal requirements, the PPT Team considers whether a child needs assistive technology devices and services. Plans for students with modifications under Section 504 of the Rehabilitation Act are also reviewed annually to determine if any technology access or assistance is needed.

The district purchases assistive technology (software, hardware and equipment) for CTECS students whose IEP requires accommodations. These purchases incorporate the principles of Universal Design for Learning (UDL) which ensures equitable access for opportunities to learn. Software titles that offer site-wide installation and take-home rights for all students and staff members meet the criteria for priority purchasing. These options provide all students with greater access to supportive software, not just students identified with special needs. There are five programs that meet our district-wide site license and take-home needs. They include(but not exclusive to): *Read Out Loud, Lexia, Inspiration, Word Q, WriteOnline, Google read and Write, Snap and Read:*

Software

- ***Read Out Loud*** is a text reader that will read aloud web pages, accessible online textbooks, searchable PDF files, and scanned textbooks.
- ***Lexia*** is a web-based program that provides students with supplemental reading decoding support. Students use a unique login and follow the program's Orton-Gillinham based scope and sequence with adjustments made by the student's individual teacher. The program may be used at home or at school.
- ***Inspiration*** allows students and instructors to create graphic organizers or outlines. Examples of use include creation of flow charts, Venn diagrams, and brainstorming. These organizers and outlines may also be transferred to Microsoft Word in order to assist students throughout the writing process.
- ***Word Q*** is a word prediction program that allows students to input words with fewer keystrokes, increasing their efficiency as well as output. This type of program has been used by students with physical handicaps, such as cerebral palsy, and by students with learning disabilities. Students may install Word Q at home on a case-by-case basis.
- ***Write Online*** is web-based program that combines word prediction/completion, text-to-speech, electronic word banks, and a graphic organizer. The program has educational features, helpful for struggling writers including speech support, word prediction, wordbar, workspace and document analysis. WriteOnline requires a unique login and can be used anywhere with a web connection.

Hardware and Equipment

Apple® Carts *(iPad®, MacBook®)* are available to each special education department. The Ipad provide greater access to commonly used mid-tech tools such as calculators, unit converters, and talking dictionaries. High-tech features such as Internet access, Voice Over for text-to-speech, and Dragon Dictate for speech-to-text are also available.

HP Netbooks are also accessible for students receiving special education support. The Netbooks have WIFI access and are also equipped with Read Out Loud, Word Q, Inspiration, Lexia, Write Online, and Microsoft Office. The Netbooks help to provide access to the tools, no matter where the students may need them in the school.

Chromebooks are also accessible for students receiving special education support. The Chromebooks have WIFI access and are also equipped with Writeonline, and Google Docs. The Chromebooks help to provide access to the tools, no matter where the students may need them in the school.

NEEDS ASSESSMENT: Infrastructure and Telecommunications

Infrastructure and Telecommunications

When evaluating your needs, consider:

- ***the current technology infrastructure of each school in your district - explaining the type of data and video networking and Internet access that is available;***
- ***the effectiveness of the present infrastructure and telecommunication services that have been provided by the district;***

Facilities across the CTECS differ widely primarily due to the age of the school buildings, thus minimum configurations have been developed. Currently, a number of CTECS schools are either under renovation or slated for renovation within the next five years. These standards seek to bridge these gaps and establish criteria for the acquisition of technology and telecommunication infrastructures until all construction projects are completed. These criteria enable the district to project the needs of schools, strategically plan, and advocate for the allocation of the resources necessary to implement the CTECS Technology Plan.

The CTECS minimum configuration includes but is not limited to:

Voice

The current telecommunications system is functional and meets the needs of the staff. Each TLE is equipped with a cable run and a handset. Once building renovation projects across the district are completed, the current system will be replaced with a *Voice Over Internet Protocol* (VOIP) system.

Video

The district has a video distribution system in place, but is currently underutilized due to a lack of professional development and/or training. Use of this system is limited to housing students' portfolios. A category 5 (CAT5) and Category 6 (CAT 6) cable network is in place with a run to each TLE. A head-end unit is available at the each school location.

Data

The internet connection is directly connected from each location to *Department of Information Technology (DOIT)* on a gigabyte fiber backbone utilizing the *Connecticut Educational Network (CEN)*. A category 5 (CAT5) or category 6 (CAT6) cable network is installed with a fiber backbone. There are *Intermediate Distribution Frames (IDF)* and a *Main Distribution Frame (MDF)*. All servers at each location are housed in a central server room. The network's backbone is upgraded and monitored on an on-going basis. Currently, all of the 100 base switches have been replaced with gigabyte switches. There is an average of eight data drops per TLE. Each lab is outfitted with sufficient data drops to support the configuration.

Information Systems

All servers in the district currently run *Windows Operating System Server 2016* with Active Directory. The file servers provide the following functions: school management software; home directories for high school staff and students; a technology server, serving the students enrolled in technology courses; print serving; data file images; global authentication server; and Follett, a server for housing network applications.

Wireless Networks

In 2011, the CTECS deployed a wireless network across all district locations. The wireless network is segmented into three sections: a public network for general connection with open network key; a domain backed network segment for connection with full security is linked to the active directory available for state owned devices; CTECS *Apple Segment* used by district-owned iPods and iPads at all district locations. Since its launch, the CTECS *Apple Segment* has been successful thereby, enabling students and staff to bring and attach personal devices to the wireless network. In 2015, the wireless infrastructure was restructure to handle many more devices since beginning in the fall of 2015 the district rolled out a 1 to 1 initiative.

Technology Learning Environments (TLEs)

On average, each academic and trade/technology TLE in the district should be equipped with technology for student and staff use. An obsolescence plan is implemented and aligned to meet the technology needs of the district's strategic plan. The obsolescence plan is executed during the summer when school is not in session in order to mitigate the temporary loss of accessibility for staff and students.

Library Library/Media Center (TLEs)

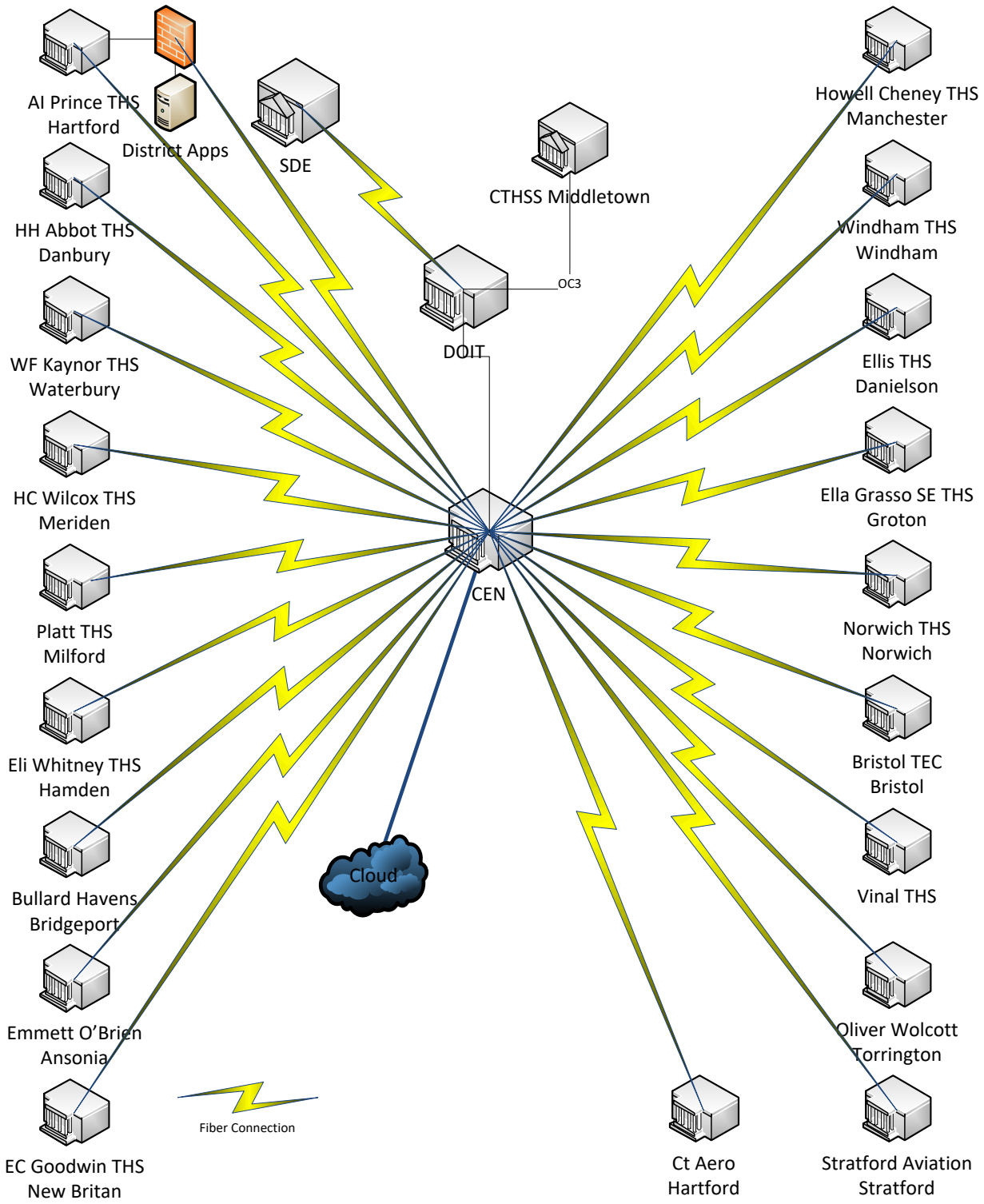
The technology in each Library Library/Media Center (LMC) provides two functions: to monitor/maintain the LMC's collection and to provide computer workstations for student and staff use. On average, each LMC lab houses 18 computer workstations for student and staff use. Additional computer workstations provide specific functions which include but are not limited to: card catalog, circulation, and video editing. As renovations of schools are completed, the available space to increase computer workstations will be realized which may include soft seating and mobile configurations to allow the space to transition to meet the instructional need of the day.

Computer Labs (TLEs)

CTECS computer labs are equipped with 24 computer workstations for student and staff use. These labs are available for teachers to sign out for whole group instruction throughout the school day. Additionally, each CTECS school has labs dedicated to language arts and mathematics instruction. The Math and Language Arts labs are designed to provide both supplemental instruction as well as providing opportunities for students to expand their academic and technology competence. All lab computer workstations are networked with internet access and printers.

CONNECTICUT TECHNICAL EDUCATION AND CAREER SYSTEM

Wide Area Network Layout



NEEDS ASSESSMENT: Administrative Needs

Administrative Needs

When evaluating your needs, consider:

- ***how do administrative (certified and non-certified) staff use technology, including accessing data for decision-making, student information system reporting, communication tools, information gathering, and record keeping; and***

The administration of the Connecticut Technical Education and Career System (CTECS) presents unique challenges. The CTECS serves approximately 11,500 full-time high school students with comprehensive education and training in 30 career trade/technology areas and 500 adult education students. The CTECS regionally serves students from 167 towns and cities in Connecticut including large urban cities, low socio-economic rural towns and middle and upper middle class suburban towns. The physical locations of our buildings span across the state of Connecticut. Additionally, CTECS is a state agency that operates within the Connecticut State Department of Education (CSDE). CTECS administration works with Bureau of Enterprise Systems and Technology (BEST) and the District Technology Education Consultant (DTEC) to align the needs of all CTECS stakeholders with operation requirements set forth by the state of Connecticut. CTECS administration and staff actively use and rely on technology to assist with all CTECS functions including: accessing data; student information system reporting; information gathering; and record keeping.

The *Connecticut Technical Education and Career System (CTECS) Data Information Systems* represent a multitude of hardware and software packages to collect, manage, manipulate and analyze data. Each package has a specific function to assist with operations in the district. Each package is evaluated annually for functionality to meet the needs of the district. These packages have been selected as the district standard for the functions defined. Standardization is necessary due to the exchange of data between district locations as well as consistency when aggregating the data for reporting and analysis. Each of the locations actively utilizes the resources of the network to communicate with other staff. The geographic composition of the district makes the functioning imperative. By utilizing these resources we are able to provide a sense of community. This type of communication has grown exponentially over the years.

Connecticut Technical Education and Career System (CTECS) Data Information Systems	
Communication	Standardized Testing
Financial Systems	State Assessments
Local Assessments	Student Management Systems (*Attendance, Scheduling, Grading, Health, Sports)*
Personnel Systems	Technology Learning Environment Management
Productivity	

Connecticut Technical Education and Career System (CTECS) Data Information Systems that are supported in this plan are for school management systems, accounting systems, student records, grading, diagnostic tools, and network management. Fundamental systems of operation are addressed to provide improvement in the automation of tasks aligned to the District's vision and mission. The table below represents the current district-wide Data Information System technologies employed by CTECS administration to carry out day-to-day operations in all district locations.

Table 1: CONNECTICUT TECHNICAL EDUCATION AND CAREER SYSTEM (CTECS) Data Information Systems					
DATA INFORMATION SYSTEM PACKAGE	***ACCESSING DATA***	***STUDENT INFORMATION SYSTEM REPORTING***	***COMMUNICATION TOOLS***	***INFORMATION GATHERING***	***RECORD KEEPING***
Naviance Naviance is an on-line career guidance and planning system. Naviance provides assessment tools; detailed occupation profiles; and comprehensive post-secondary education information. Career Cruising utilizes a portfolio system that enables students to develop long-term plans; provides access to real time career information; and relevant statistics needed to track students' progress and achievement. To address 21st Century skills and Student Success Plans (SSPs) as mandated by the Connecticut State Department of Education and Perkins Federal legislation, this product will allow school counselors to track students' progress and assist them in making informed decisions.	X	X	X	X	X
CeDAR The CeDAR website is used extensively to collect and correlate data from all of the district's locations. CeDAR allows the district to download the data into multiple formats so that the district can query multiple sets of data from multiple sets of timelines. The data located here is not housed anywhere else in the district at this time.	X	X		X	
CoreCT The CoreCT system is the central office system that houses all payrolls, personnel, and accounting functions. All personnel information is tracked through this system including: attendance, pay scales, step information, work schedules, etc. The accounting system has all payable, receivables processed through it. Vendor list and account balances are automated. Payroll information is digital as well, electronic transmissions are handled by this system. Though each of the sub functions works independently, the systems are integrated electronically. All of these functions are under constant review for functionality and integration.				X	X
Destiny® The Follett system is the software package used by each Library/Media Center for the purposes of cataloging, circulation, inventory, and many other Library/Media Center functions. The Follett system integrates with PowerSchool for student information. All books and AV equipment information is stored and tracked through this system. The system also allows for the acquisition and circulation of electronic resources.		X		X	X

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DATA INFORMATION SYSTEM PACKAGE	*ACCESSING DATA*	*STUDENT INFORMATION SYSTEM REPORTING*	*COMMUNICATION TOOLS*	*INFORMATION GATHERING*	*RECORD KEEPING*
eManagersite eManagersite is a professional visual editor for creating and managing websites and webpages. eManagersite allows districts to create and edit cross-platform and cross-browser pages. This platform uses dynamic HTML that allows animated layers and is the primary software package used for the design of the CTECS district and school based web-sites.	X		X		
EDGE Edge is a core reading**/**language arts program designed for striving readers and English Language Learners (ELLs) in grades 9-12 reading below grade level. The program builds upon a student's success by increasing the text level of difficulty. The program prepares students for success on exit exams; moving them toward reaching graduation. The program provides essential questions and readable, relevant literature to engage students. The program is designed for unit projects to employ literacies necessary for competence in the real world.	X	X		X	X

Table 1: CONNECTICUT TECHNICAL EDUCATION AND CAREER SYSTEM (CTECS) Data Information Systems

DATA INFORMATION SYSTEM PACKAGE	*ACCESSING DATA*	*STUDENT INFORMATION SYSTEM REPORTING*	*COMMUNICATION TOOLS*	*INFORMATION GATHERING*	*RECORD KEEPING*
IEP Direct/Frontline IEP Direct is a web-based application that automates and delivers any districts' RTI and IEP process, simplifying a traditionally paper driven process. The program drives day-to-day activities, monitors academic and behavioral progress, and shows which interventions are most effective. Tracking, monitoring and managing intervention and student performance data, IEP Direct ensures fully-informed decision making and high quality instruction to help all students succeed. The District is able to track research-based interventions and data-driven decision-making in order to report on the progress monitoring of students in the General education Curriculum. IEP Direct reduces the complexity, effort and compliance concerns associated with managing Special Education and Individual Education Plans and manage all aspects of Special Education and IEP data management including consents, referrals, evaluations, LRE, and service delivery models. Holistic view provides access to all historic and currently planned events. Automatic compliance checking at the field, form, and event level keeps districts compliant with state and federal law. District makes use of the customizable library of goals and objectives aligned to state learning standards, incorporating Progress Monitoring and instructional strategies based on district and scientifically based best practices to create individualized programs to meet student needs with early warning indicators to quickly identify performance gaps on prescribed IEP goal. The seamless process flow between SPED, Response to Intervention and all specialized intervention programs i.e. 504, ESOL, G&T providing a collaborative approach to individualized instruction, eliminating additional data entry utilizing the educator dashboard to quickly record and monitor IEP goal progress. The District is able to track student IEP progress, overall growth and learning plans through easy to read progress monitoring and growth graphs.	X	X		X	X

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FitnessGram/ActivityGram FitnessGram/ActivityGram is a web-based software platform that students and staff can access both in and out of school. FitnessGram is a computerized tool that enables teachers to perform research-based physical fitness assessments. FitnessGram assesses a student's health related fitness in four areas: cardiorespiratory endurance, flexibility, muscular strength and muscular endurance. ActivityGram is a web-based tool for students to track their physical activity levels outside of school. ActivityGram augments the health-related fitness goals of FitnessGram by providing students and their families' detailed reports and suggestions for the maintenance or improvement of a student's health-related fitness.	X	X	X	X	X
Horizon Fast Lane The point of sale system, Horizon FastLane accounts for the sales and the cash collected at the 17 technical high schools. The software stores individual student purchases and summarizes information for monthly federal and state reporting purposing. The point of sale system manages the Free and Reduced lunch application process and is used by all students that participate in the National School Breakfast or Lunch Programs available at all of the technical high schools except Bristol TEC. The cafeteria staff operates the system at the school level and the Nutrition and School Meals. Staff monitor the point of sale system at a district level. All data is stored on a server within our District. The system collects the following information: • Tracks free, reduced, full price, adult breakfast and lunch meals o Broken down by meal eligibility of Free, Reduced Price, and Full Price • Items sold o Examples – breakfast and lunch meals, a la carte, snacks/beverages, and milk • Cash collected o At the point of service o Collected for payment on account or prepayment use • Prices and layout of the menu changes are made before the start of the school year o Items are added as needed o Menu items updates are updated weekly or as needed o Free/Reduced information is updated daily or as needed	X	X	X	X	X

Table 1: CONNECTICUT TECHNICAL EDUCATION AND CAREER SYSTEM (CTECS) Data Information Systems

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Inspiration Inspiration is a software learning tool for visual mapping, outlining, writing and making presentation. Inspiration is available district-wide and allows students and instructors to create graphic organizers or outlines. Examples of use include creation of flow charts, Venn diagrams, and brainstorming. These organizers and outlines may also be transferred to Microsoft Word in order to assist students throughout the writing process.				X	
LAS Links K-12 Assessments LAS Links is a research-based test that surveys the listening, speaking, reading, writing and comprehension skills of English Language Learners (ELLs) in grades K-12. The assessment allows teachers to accurately and reliably place students within the program that best meets their needs. The test results link to teaching strategies an instructional guidance for teachers create lesson plans, provide extra practice on designated skills, or give remediation. Staff development materials offer teachers instruction on how to interpret and apply test results to enhance classroom instruction and student learning. Benchmark tests allow teachers to continually monitor students' progress toward achieving state standards throughout the year.	X	X		X	X
Lexia Reading® *Lexia Reading®* education software Lexia reading software supports the teaching of primary reading skills in schools and at home. CTECS students who need supplemental reading decoding support may use the web-based version of Lexia. Students use a unique login and follow the program's Orton-Gillinham based scope and sequence with adjustments made by the student's individual teacher.	X	X			X
Microsoft Exchange Microsoft Exchange is the district's email system. All staff in the district has an email account. Distribution groups have been set up to maximize usage. All internal communications will be done via this system. The email system also houses some basic information shared by all staff.			X		X
Microsoft Office Microsoft Office has been selected as the district standard for word processing, spreadsheets, database creation, presentation, and publishing. Every machine in the district has been loaded with MS Office.	X		X	X	X

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Google Classroom Google Classroom is a software package for connecting the GSuite to all staff and students. Google Classroom is provided freely as a virtual learning environment. Classroom allows educators to create on-line courses which students can access as a virtual classroom. Classroom features include on-line quizzes, forums (where students can post comments and ask questions), glossaries of terms, and links to other web resources. Classroom provides an organized interface for eLearning or learning over the internet.	X		X	X	X
National Institute of Metalworking Skills (NIMS) NIMS is an on-line assessment/credentialing system for students and staff. Educational institutions use NIMS credentials as performance measures to assess students' skills and to measure program performance tailored to Industries' needs. NIMS currently offers 52 metalworking credentials. CTECS students are required to take the NIMS performance and theory Machining Level 1 assessment. Machining Level 1 includes 11 credentials designed to meet entry level requirements for on-the-job skills. In addition, CTECS teachers are afforded the opportunity to earn NIMS credentials.	X	X		X	X
National Occupational Competency Testing Instrument (NOCTI) NOCTI is a standardized test for students studying a trade in high schools and technical colleges in the United States. NOCTI assessments can also be used to test employees in job environments. This is the standardized testing environment for the trade technology areas. Results for these tests are collected and aggregated.	X	X		X	X
Renaissance Learning *Renaissance Learning* is a software package that includes *Accelerated Reader* and Star Reading. Teachers monitor and manage students' differentiated daily reading and language arts practice. *Renaissance Learning* personalizes practice assignments, learning progressions and reports that help teachers fill learning gaps and provide instructional direction for students. The software is aligned to textbooks in the district as well as link to the state standards ensuring reading and success. Some of their highlights of this program are to: allow the school and district administration to work directly with the data; focus on maximizing academic/trade technology learning time; promote appropriate practice on core objectives; monitor teacher and student progress; help change the culture of schools; and build the skills needed for college and careers.	X	X		X	X

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PowerSchool ➢ **PowerSchool** ➢ **PowerSchool Bulletin** ➢ **PowerTeacher** The present student information system is PowerSchool. This student information system is all student demographics, attendance data, scheduling, grading, and emergency contact information. All school administrator and office staff access this system on a daily basis. School faculty access the system as well for items such as grading and attendance. Individual student pictures are also loaded. The current PowerSchool system is comprised of 7 file servers in an array. There is real time and accessible over the web from inside and outside of the district. The new 12.0 version will allow the district to further and customize the options inside PowerSchool for staff, students and parents. This being said, we have an additional need to expand our communication capabilities between ourselves and the student's home. With the utilization of the PowerSchool product we are now able to allow teachers, students and family members to access a student's educational record remotely. Families have the ability to review the student's demographic information and submit modification if necessary. Other information that is available is: student's attendance, grading, teacher assignments, and current schedule, discipline records, graduation progress, and school bulletins.	X	X	X	X	X
Frontline - Professional Learning Frontline™ is the application used by the district to monitor and track all professional learning activities in the district. The application has been in use for the past 2 years with great success. District employees are able to monitor and track their own transcript. At the district level, we are able to use the application to extract data based on needs and trends.	X		X	X	X
Read Out Loud *Read Out Loud* software is a text reader program which provides whole school access to eBooks and the internet. *Read Out Loud 6* enables in-school and at-home student access to eBooks and the internet. Additionally, *Read Out Loud 6* includes accessibility supports such as text-to-speech and comprehension study tools.	X		X		

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ServSafe ServSafe is a Food Safety training and certificate program administered by the Service National Restaurant Association. The program is accredited by the American National Institute Conference for Food Protection. This online assessment is designed for those working in a variety of workplace settings that require the preparation and serving of food. A ServSafe certificate is a basic entry level credential required by Food Service entities i.e., restaurants, hospitals, Delis, etc. CTECS students are required to take the ServSafe certification online assessment in grade 12.	X	X		X	X
SNAP Health Center SNAP Health Center is a comprehensive medical documentation and tracking software suite that manages every aspects of student health related data. The software allows nursing staff to quickly review a student's visit history, medical alerts, screening progress, immunization status and current mediations. The system allows for in-depth reporting customized form letters, visit documentation, mediation administration, and easily analyzes health data.	X	X	X	X	X
Tablet Technology Tablet Technology was not originally designed to function in an educational setting. The current application development, however, has made Tablet Technology (such as the iPad/Surfaces) a critical instructional tool for both students and staff. The CTECS' Tablet initiative utilizes applications (Apps) for both academic and trade/technology content delivery. Additionally, specific administrative functions with these devices correlate to accessing data, information gathering as it relates directly to the school improvement process/plans.	X		X	X	

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Frontline - Evaluation Frontline - Evaluation is an application that allows for the collection of classroom observation data using various handheld devices i.e., MS Surfaces, iPad, and Chromebooks. Frontline -Evaluation facilitates schools through collecting and analyzing data, and promotes reflective and focused dialogue about teaching and learning. This process provides principals and coaches the ability to collect and analyze data about the quality of instruction, the level of student engagement, and the rigor of the curriculum. The Walkthrough process culminates in translating data into action steps for improvement, bridging the gap between where schools are and their ultimate potential.	X	X	X	X	X
Word Q Word Q is a speech recognition software program. Word Q is a writing tool that empowers students to independently write, edit and proofread. Struggling benefit from the spoken feedback and suggested words. Word Q is a word prediction program that allows students to input words with fewer keystrokes, increasing their efficiency as well as output. This type of program has been used by students with physical handicaps, such as cerebral palsy, and by students with learning disabilities. Students may install Word Q at home on a case-by-case basis.	X		X		
WriteOnline WriteOnline is an on-line word processor for all students accessible in school and at home. WriteOnline has educational features, helpful for struggling writers including speech support, word prediction, wordbar, workSpace and document analysis. Write Online is web-based, and combines word prediction/completion, text-to-speech, electronic word banks, and a graphic organizer. The program requires login credentials and can be used anywhere with a web connection.	X		X		
iBoss Filtering iBoss is the district web filtering software. The filtering software can be modified to filter the categories desired. Specific websites can be either added or deleted from the restricted list. The web filtering software is also utilized to limit users to sites that degrade network performance.			X	X	X

When evaluating your needs, consider:

- ***the professional development opportunities that are available to administrative staff:***

Professional development workshops/trainings are offered throughout CTECS and open to all staff. The following is a sampling of titles available to administrators. The administrative staff has also spent this past year going through extensive training on Professional Learning Communities. The administrative staff will continue to build out this culture.

Connecticut Technical High School Technology Professional Development Offerings

3D Design	Inspiration	Renaissance Math
Acquity - Online Admissions Test	Integrating Technology into the TLE	Renaissance Reading
Adobe® Content Server5	Intel: Teach to the Future	Renaissance Responders
Advanced Query	Intro To Assistive Technology	Residential Systems
Apple IPod Training	Lectra/3D	Server 2008
Assistive Technology	Lexia	SmartBoards
AutoCad	Microsoft Office 2018	Frontline
Automating and integrating	Microsoft Publisher	Test Creation
Avionics	Mimio	Utilizing Flip Camera into instruction
Clarity	Modaris Pattern Design	Web 2.0
Computer Graphics/ Art	Moodle	Wikis Blogs and More
Destiny®	Networking Systems	Windows 10
Discovery Education	NOCTI test Generator	Wireless Integration
EBSCO	Online Tutorials	Word Q
Eportfolios	Powerit® - Teacher Websites	WYNN to Voice
Esysco	PowerSchool	Read Please
Feeman	Scheduling - District	Chromebooks in Education
Geometers SketchPad	PowerSchool Mass Scheduling - School Administrative Team	Trade-specific software programs
Google Docs	PowerSchool Mass Scheduling – School Clerical	Elmo Document Cameras
Green Globs	PowerTeacher	TI-Smart View
HTML	ProbeWare	

NEEDS ASSESSMENT: Speak UP Results

What is the Speak Up Survey and why is the CTECS leveraging this resource?

Speak Up is a research project designed to collect and report on the authentic, unfiltered ideas and views of K-12 students and their parents, teachers, community members, and administrators.

In general, Speak Up has three primary objectives:

1. To provide a means for local schools and districts to easily and effectively listen to and act upon the ideas of their stakeholders.
2. To provide a conduit for the voices of education stakeholders, most notably students, to inform national and/or state/provincial policies and programs.
3. To stimulate new local discussions around the use of technology within education.

Speak Up is a research project in that a large collection of survey data is analyzed and shared for the public good. Speak Up is a service offering for schools and districts that provides local education leaders with invaluable data and insights from their stakeholders to inform their own local plans. Speak Up and its outputs are also a convening mechanism that facilitates a way for many different stakeholders in the education community to think about the use of technology within education.

Speak Up is conducted through Project Tomorrow. Through Project tomorrow they are very mindful of all of these aspects and try to always provide good stewardship of the data and the process for all of our stakeholders: the students, educators, community members, and parents who share their ideas with us, our partners who help us with outreach. We also understand that depending upon your point of view you may view Speak Up with a particular bias – as a research project, as a service offering or as a discussion convener. We believe that the multi-functionality and multi-impact of Speak Up is in fact representative of a very effective and innovative program.

Survey Methodology:

The project methodology includes both reading level appropriate online surveys and focus groups. Any school or district that wants to participate in Speak Up is eligible to do so including private as well as public schools, charter schools, parochial schools, virtual schools etc. While the online student surveys are only currently available in English, the parent survey is available in English or Spanish. The online surveys are facilitated through cooperating schools and districts who sign up to participate in Speak Up, select their own specific password, and monitor the survey taking process. The only demographic information collected from the students is grade and gender. Other demographic data is asked on the parent, teacher and administrator surveys but those are noted as optional questions. All data collected is 100% confidential and no single individual can be identified from any submitted survey. The online surveys are open for input typically in the fall and are available through any internet accessible computer, at schools, in libraries, in community centers and through personal access at home. Speak Up is not a typical, textbook model research project as it is fundamentally a convenience sampling; though the participation selection is not at the individual level but at the school or district level. Each year we also conduct 15-20 face-to-face focus groups with students and educators to inform our data analysis.

The CTECS is leveraging Project Tomorrow's Speak Up survey for the following reasons:

- Research based
- 3rd party created
- Nationally recognized
- Viewpoints for other demographics
- Gathers feedback from all stakeholders

Speak UP Survey Results- Students
1167 Respondents

Commendations

- Most students in the CTECS view themselves as above average or advanced technology users
- Most teachers do leverage some type of technology into the classroom
- School Web Filter allows for instruction and is adjusted when needed
- Students live in a full virtual world with almost every element of their life digitally
- We access social media for school work
- Students leverage the technology to collaborate with peers, teachers, and educational resources from the school
- Students can adjust the technology to their learning style
- The use of technology increases my engagement of learning

Recommendations

- Students have responded that they would like to work more in a blended classroom but the current instruction model is delivered in a traditional model
- The technology leveraged into instruction is still as an add-on and not imbedded into the lesson
- Students are still not allowed to use their mobile device (BYOD)
- Lack of Internet Capability
- Teachers having too many rules against technology
- Students can leverage any type of technical device
- Students would like the option to take classes on line – almost any topic
- Educational Gaming would greatly increase learning
- The CTECS needs to leverage more digital resources for the students (textbooks, forms, etc.)
- Students would learn more if the classes used more technology to support learning

Speak UP Survey Results- Administrators
17 Respondents

Commendations

- Administrators feel it is important to implement technology into the school's core mission
- Technology is available to support me in my role
- School buildings are able to explore different technologies
- Blended Learning Environments are encouraged
- Administrators effectively communicating with the parents/students through whatever means is most comfortable to the parent or student
- Belonging to professional organizations that can provide relevant information

Recommendations

- Adequate funding is a major concern for administrators
- Too many approaches to technologies to implement
- Further definitions and clarifications are needed on the role of BYOD across the district
- CTECS does not have a clear vision on the presence of virtual classes and preparation needed for post-secondary
- CTECS does not offer true virtual classes for credit
- CTECS needs to further support teachers and administrators in flipped classrooms
- Providing enough devices for staff and students
- Internet bandwidth to support all instruction
- Professional Development for administrators in Evaluation to develop materials/ assessments/ educational resources

Speak UP Survey Results- Parent
176 Respondents

Commendations

- All respondents had internet connectivity
- Parents believe that the use of technology in their child's education IS important
- Access to resources when their child needs and chooses to use the technology is critical
- School can communicate to parents through multiple mediums

Recommendations

- Resources being accessed at school are not updated
- Parents feel it is the schools responsibility to provide the technology if it is required for learning
- Students should be allowed to leverage their own device if they have one
- Parents have taken online classes for their own employment and feel that their children should be having the same experience in their education environment
- Internet safety should be imbedded into the school curriculum
- Parents need to know how the school/district is protecting their child's data

Speak UP Survey Results- Community Member and Business Partners
19 Respondents

Commendations

- Through their employment they have had the opportunity to take online coursework
- Believe funding is the largest obstacle facing educators today
- Believe students should be well rounded and critical thinkers
- Youth can gain the most work experience by actual on the job training that is provided

Recommendations

- The educational institutions are not adequately preparing the students for the environments that exist in the workforce
- Student's access to high speed broad band network is imperative
- The school's greater community should be supporting the educational learning with community hot spots and connectivity
- Students should be able to leverage their personal devices in a school setting and be able to self-select when it is appropriate to use the technology – similar to the work force

Speak UP Survey Results- Library Media
19 Respondents

Commendations

- Most feel they are advanced technology users
- Versed in multiple device technology
- Support students research tasks
- Co-Teach lessons with teachers leveraging multiple technologies and Media Center resources
- Many types of technology available to staff and students

Recommendations

- Struggle with the constantly changing validity of the digital resources
- Professional Development on the technology
- Embracing what role this plays in the teaching and learning
- Lack of funding towards technology/media center resources
- Students still struggle with knowing and evaluating the creditability of sources

NEEDS ASSESSMENT: Digital Learning Readiness Report Card

Future Ready, an initiative announced by President Barack Obama in November 2014, is an effort to help school district leaders improve teaching and student learning with technology. The initiative, a joint project of the Dept. of Ed. and the Alliance for Excellent Education and a coalition of others, provides districts with free resources and support to ensure that local technology and digital learning plans align with instructional best practices.

The following is the CTECS submission of the Digital Readiness submission which highlights the areas we are prepares and pinpoints the areas of focus we need to work on in the next technology plan cycle. Details of each area of focus are in the next section for review and the full report is located in Appendix L Page 256

The Connecticut Technical High School's Overall Rating on the Digital Readiness Report is a 7 out of 10,

Here are the Specific Commendations and Recommendations by project gear:

Gear 1 – Curriculum, Instruction and Assessment – CTECS rated a 5.4 out of 10 for preparedness

Commendations:

- The district understand the importance of 21st century skills, individualized learning
- There is transformation from traditional to online assessments
- District consultants review curricula to apply current technologies to improve learning
- Assessment data is used to drive and inform instruction

Recommendations:

- Systemic approach needs to be made in curriculum development as to its consistency across all content areas
- All constituents are not ready to make resources available in multiple formats
- While plans are written and understood for personalized learning execution may be challenging
- Curricular documents and resources are not fully developed in current trends and formats

Gear 2 – Use of Time – CTECS rated a 5.25 out of 10 for preparedness

Commendations:

- Within Career clusters students are allowed to explore areas of focus
- Staff are recently allowed to explore more personalized Professional Development
- Technology is in place to support anywhere anytime learning
- Mastery Based Learning (Mathematics) is being explored

Recommendations:

- Students cannot take courses when they feel appropriate – anywhere anytime learning
- School and Student schedules are very restrictive
- Core Academics lock step student pathways

Gear 3 – Technology, Networks and Hardware – CTECS rated a 5 out of 10 for preparedness

Commendations:

- Hardware and Networks are ready to support curriculum use
- School networks are robust and meet school needs
- Most students have high speed internet access at home (upper 90%)
- Budget acquisition reflects an equitable approach
- Budget/Acquisition reflects current trends and needs
- Purchases are reviewed and evaluated

Recommendations:

- Budget needs to be consistent over multiple years and predictable
- Support personnel does not meet the demand of staff needs

Gear 4 – Data and Privacy – CTECS rated a 7.25 out of 10 for preparedness

Commendations:

- District has conversation and takes steps to guard data

- Data systems are identified and transitioned to online assessments
- Data systems are linked to ensure accuracy of data and data elements
- Data policies are up to date and reviewed frequently to ensure they meet evolving standards and requirements
- Educators are data literate and understand legal and ethical issues involving data

Recommendations:

- Continual Professional development needs to occur on new laws that have emerged around data

Gear 5 – Community Partnerships – CTECS rated a 9.4 out of 10 for preparedness

Commendations:

- CTECS knows the community to which it is located
- Cultural and Diversity is widely accepted in our locations
- CTECS communicates effectively to the greater school and the community to which it is placed
- THS has reached out and created strategic partnerships
- CTECS has created its own branding
- Individual school buildings are responsive to particular student and family needs

Recommendations:

- Partnerships need to be created for long term
- Partnerships need to be built stronger on the district level

Gear 6 – Professional Learning – CTECS rated a 10 out of 10 for preparedness

Commendations:

- Shared ownership for all professional learning
- Multiple types of professional learning are offered
- District leaders model professional learning models
- Professional Learning is based on a research based approach
- CTECS offerings are flexible to make changes to reflect student needs

Recommendations:

- More customizable opportunities need to be available
- More flexible schedule needs to be available for staff to take a more broad set of offerings
- Alternate types of delivery need to be options
- Professional Learning offerings should tie back to student learning

Gear 7 – Budget and Resource – CTECS rated a 7 out of 10 for preparedness

Commendations:

- CTECS able to change purchasing guidelines to reflect better resources that are more cost effective
- CTECS pursues grant opportunities when possible for technology
- Content analysis occurs to review costs/benefit
- BYOD in encouraged
- Hardware and Software purchases are reviewed to ensure program alignment and functionality

Recommendations:

- Strategies that support systemic change into digital learning are slow based on staff apprehension
- Budget development occurs with the intent on leveraging technology to reduce costs

- Maintenance and Obsolescence plans are included in budget

- Sufficient Support staff needs to be acquired to support all technology

Recommendations across All of the Gears:

A Shared Forward- thinking vision for Digital learning Readiness: District Score 7

District Leaders establish strategic and tactical plans for a) developing a: shared vision for digital learning, b) Formally adopting that vision as a component of the district's overall goals, c) aligning all programs to the vision and d) establishing metrics to the assess progress toward the vision.

A culture of Collaboration, Innovation, Capacity, and Empowerment: District Score 7

District Leaders have established a plan for transitioning a collaborative culture of change, where empowered leaders have the flexibility, adaptability, responsibility and authority to , act, provided such actions have high potential to advance the high vision.

High Expectations for Evidence-Based Transformations to Digital Learning and Readiness: District Score 1

District Leaders analyze research studies on the potential impact of digital learning on student attainment of the learning goals, thus forming a knowledge base on digital learning. They also document various models of evidence based reasoning and models of change management.

Transformative, Coherent Thinking, Planning, Policies, and Implementation: District Score 7

District leaders develop a strategic plan to advance digital learning. The plan uses the P24 framework to ensure coherent thinking across the system's policies and procedures, practices, and investments.

Technology Budgets

CTECS Composite requests for funding year 2019 through 2023
Budget details are included in Appendix N

Composites	19-20	20-21	21-22	22-23
Building/Academic**	$10,932,289.00	$4,241,605.00	$6,425,802.00	$4,508,570.00
Trade Technology**	$3,379,300.00	$2,543,500.00	$2,091,100.00	$2,511,100.00
Bulb Account	$50,000.00	$50,000.00	$50,000.00	$50,000.00
Toner Account	$155,000.00	$155,000.00	$160,000.00	$160,000.00
Technology Repair	$125,000.00	$125,000.00	$125,000.00	$125,000.00
AV Maintenance	$45,000.00	$45,000.00	$45,000.00	$50,000.00
Switching Hardware (included in the Building/academic amount)	$900,000.00	$900,000.00	$900,000.00	$1,000,000.00
Internet	$300,000.00	$300,000.00	$325,000.00	$325,000.00
AV Repair	$90,000.00	$110,000.00	$110,000.00	$130,000.00
CEPF**	$88,700.00	$226,440.00	$374,700.00	$502,800.00
Tech Support for Deployment	$100,000.00	$225,000.00	$300,000.00	$300,000.00
Professional Development	$50,000.00	$50,000.00	$55,000.00	$65,000.00
Microsoft Campus Agreement	$320,000.00	$223,000.00	$223,000.00	$223,000.00
Software and subscriptions	$2,000,000.00	$2,000,000.00	$2,500,000.00	$2,500,000.00
**Total Bond Requests	$14,400,289.00	$7,011,545.00	$8,891,602.00	$7,522,470.00
Total Technology Budget Request:	$18,535,289.00	$11,194,545.00	$13,684,602.00	$12,450,470.00

PLAN IMPLEMENTATION

LEA Technology Goals and Strategies

The LEA technology plan should be aligned to the National and State Tech Plans and include the following State Goals. The LEA may include any additional goals that apply to their technology plan.

Goal 1: Engaging and Empowering Learning Experiences

Goal 2: Assessment

Goal 3: Connected Teaching and Learning

Goal 4: Infrastructure for Teaching and Learning

Goal 5: Productivity and Efficiency

Goal 1: Engaging and Empowering Learning Experiences

National Tech Plan	State Tech Plan
1.0 Learning: Engage and Empower *All learners will have engaging and empowering learning experiences both in and out of school that prepare them to be active, creative, knowledgeable, and ethical participants in our globally networked society.*	***Goal 1: Engaging and Empowering Learning Experiences*** *All learners will have engaging and empowering learning experiences both inside and outside of school that prepare them to be active, creative, knowledgeable, and ethical participants in our globally networked society.*
What will your district do over the life of this local Tech Plan to ensure that learning experiences are empowering, engaging, and supported by digital tools?	

Action Plan for Goal Area 1

	What Steps Will You Take?	*Who Will Be Responsible?*	*When?*	*How will you measure?*
1.1	Ensure that students have multiple educational opportunities in grades 9-12 to utilize technology	District Technology Education Consultant Content Education Consultants Assistant Superintendent for *Curriculum and Instruction*	On-going	1.1.1. Curriculum documents identify technology competencies 1.1.2. Model lessons and curriculum posted to shared virtual drive 1.1.3. Create a lesson repository in the CTECS OER repository 1.1.4. Measure equity of professional learning and access to technology 1.1.5. Curriculum is updated based on the review cycle as outlined in Appendix O
1.2	Continue to embed ISTE technology competencies to matching state and national content standards into all academic and trade/technology curricula in grades 9-12 to meet the needs of all learners	District Technology Education Consultant Content Education Consultants Assistant Superintendent for *Curriculum and Instruction*	On-going	1.2.1 Curriculum documents showcase cross walk of ISTE (International Society of Technology and Education) technology skills into curriculum, assured experienced which utilize technology are posted, exemplar lessons gathered and posted onto virtual shared space 1.2.2. Language Arts and Math Labs physical and philosophical design revolves around infusing technology 1.2.3. Mastery Based Learning Concepts be piloted across the district in multiple content areas 1.2.4. Roll-out of 1 to 1 computing across the district to meet the needs of mastery based learning and “just in time” instruction

Action Plan for Goal Area 1				
What Steps Will You Take?		***Who Will Be Responsible?***	***When?***	***How will you measure?***
1.3	Integrate technology tools and strategies into all academic and trade/technology curricula with an emphasis on STEM (Science, Technology, Engineering and Mathematics) initiatives	Content Education Consultants Assistant Superintendent for *Curriculum and Instruction* Information Technology (IT) Staff Academic/Trade/Technology Department Heads Classroom teachers	09/31/2019 07/01/2020	1.3.1. Published curricula on the district's website 1.3.2. Review of all materials relevant to curriculum updates, modifications and resources to support STEM by the District Academic, Trade/Technology Units 1.3.3. Purchasing reflect STEM and 21st Century needs, must have input from building staff 1.3.4. Professional learning for academic and trades in incorporating STEM 1.3.5. Curriculum is updated based on the review cycle as outlined in Appendix O
1.4	Ensure access to all curricula through the use of assistive technology software and/or hardware for supplemental instruction, support and reinforcement	Special Education Consultants District Assistive Technology Teacher District Technology Education Consultant	On-going	1.4.1. Individual student needs for assistive technology are identified and listed in IEPs and 504 plans 1.4.2. Maintain/upgrade technologies as needed 1.4.3. Review assistive technologies by the District Special Education Unit 1.4.4. District resources will be reviewed and evaluated for technology alignment based on the Textbook review process – Appendix P and the Educational App review - Appendix Q

Action Plan for Goal Area 1				
What Steps Will You Take?		***Who Will Be Responsible?***	***When?***	***How will you measure?***
1.5	Design/implement units to integrate the use of technology in academic and trade/technology curricula	Content Education Consultants Assistant Superintendent for *Curriculum and Instruction* Classroom teachers	12/31/2019 07/01/2020	1.5.1. Published curricula on the district's intranet website/ LMS Curricular sites/ CTECS OER repository 1.5.2. Review of all materials relevant to curriculum updates and modifications by the District Academic, Trade/Technology Units 1.5.3. Publish content-specific embedded technology units on the curricula CTECS OER repository/ LMS Curricular sites to ensure mechanisms for sharing and collaboration District resources will be reviewed and evaluated for technology alignment based on the Textbook review process –Appendix P and the Educational App review - Appendix Q
1.6	Encourage students to expand their technology competence through advanced technology learning opportunities in academic and/or trade/technology classes	Classroom teachers School-based Technology Chair Information Technology (IT) Staff	On-going	1.6.1. Collect student post evaluations, performance assessment data, or samples of student work [trade credentials, digital badges] 1.6.2. Review usage of digital assessment software suite reports
1.7	Increase the use of technology resources that offer students the flexibility to learn anytime, anywhere i.e. laptops, iPads, Chrome Devices, videos, etc. intended for use in and out of school	Library/Media Education Consultant District Technology Education Consultant CSDE Information Technology (IT) Staff Superintendent Legal Education Consultant Connecticut Education Network (CEN) staff	Current On-going	1.7.1. Monitor access logs 1.7.2. Review library circulation reports 1.7.3. Review policies to modify and adjust to incorporate student use of technology resources in and out of school 1.7.4. Review Library/Media Center technology resource inventory intended for use in and out of school 1.7.5. District Policy review cycle to enable student and staff sign out of district resources

Action Plan for Goal Area 1				
What Steps Will You Take?		***Who Will Be Responsible?***	***When?***	***How will you measure?***
1.8	Provide access to Blended Learning environments and broaden the base of classes provided	Technology Consultant IT Staff School Administrators Content Area Teachers Content Education Consultants	On-going	1.8.1. Monitor access logs 1.8.2. Curriculum items being used by staff 1.8.3. Digital assessments being given by the staff 1.8.4. Log reports of student activity to digital resources

Goal 2: Assessment

National Tech Plan	State Tech Plan
2.0 Assessment: Measure What Matters *Our education system at all levels will leverage the power of technology to measure what matters and use assessment data for continuous improvement.*	***Goal 2: Assessment*** *Our education system at all levels will leverage the power of technology to measure what matters and use assessment data for continuous improvement.*
What will your district do over the life of this local Tech Plan to ensure that technology is used for assessment?	

Action Plan for Goal Area 2

	What Steps Will You Take?	*Who Will Be Responsible?*	*When?*	*How will you measure?*
2.1	Analyze technology performance indicators embedded in high stakes test data to improve student achievement, i.e. NOCTI, PSAT, NIMS, SBAC, etc.	Superintendent Assistant Superintendent for *Curriculum and Instruction* Assistant Superintendent for *Data Management and Research* Content Education Consultants School Administrators School-based Data Teams School Counselors Department Heads Classroom Teachers	On-going	2.1.1. District-wide SMART goals that include technology performance indicators embedded in high stakes test data 2.1.2. School-based SMART goals that include technology performance indicators embedded in high stakes test data 2.1.3. High stakes student achievement data and reports published and maintained in secure folders on the district's network 2.1.4. Evidence of direct student instruction in technology related to testing process, in order that the technology doesn't create a barrier to their achievement measures.

Action Plan for Goal Area 2				
What Steps Will You Take?		***Who Will Be Responsible?***	***When?***	***How will you measure?***
2.2	Analyze technology performance indicators embedded in district and school-based performance, formative and summative assessment data	Superintendent Assistant Superintendent for *Curriculum and Instruction* Assistant Superintendent for *Data Management and Research* Content Education Consultants School Administrators School-based Data Teams School Counselors Department Heads Classroom Teachers	On-going	2.2.1. Performance, formative and summative assessments embedded with technology performance indicators to improve student achievement published on the district's website 2.2.2. Performance, formative, and summative assessments embedded with technology performance indicators results reports published on the district's website 2.2.3. Performance, formative, and summative assessment data embedded with technology performance indicators reports are published and maintained in secure folders on the district's network 2.2.4. Develop DSA's as online assessments to mirror State and National assessments
2.3	Develop a competency rubric for grades 9-12 to assess student progress in the application of technology skills which will be embedded into the Senior Capstone project.	District Technology Education Consultant Content Education Consultants Assistant Superintendent for *Curriculum and Instruction*	7/1/2020	2.3.1. Published rubrics on the district's curriculum intranet website 2.3.2. Where appropriate trade credentials and digital badges
2.4	Identify and support students who do not demonstrate technology competence and provide additional instructional support	District Technology Education Consultant Content Education Consultants Assistant Superintendent for *Curriculum and Instruction* School Administrators School Counseling personnel Technology teachers Library/Media Education Consultant	On-going	2.4.1. Digital assessment results used to monitor and adjust student's progress 2.4.2. RTI database system usage report 2.4.3. Provide Systemic Professional Learning opportunities for Library/Media Specialists to prepare them for their role in supporting students' technology literacy

Action Plan for Goal Area 2				
What Steps Will You Take?		***Who Will Be Responsible?***	***When?***	***How will you measure?***
2.5	Monitor and support school improvement and/or data teams to facilitate the data driven decision making process to ensure alignment to the technology plan	District Technology Education Consultant School Improvement Consultant Superintendent Assistant Superintendent for *Curriculum and Instruction* Assistant Superintendent for *Data Management and Research* IT Staff School Administrators Parents Students	Ongoing	2.5.1. Evaluate existing district and school-based data teams 2.5.2. Provide timely student achievement data accessibility to all relevant stakeholders on the district network
2.6	Provide and expand the use of on-line assessments to improve student achievement	District Technology Education Consultant School Improvement Consultant Superintendent Assistant Superintendent for *Curriculum and Instruction* Assistant Superintendent for *Data Management and Research* IT Staff	On-going	2.6.1. Usage reports 2.6.2. Inventory list of on-line software 2.6.3. Incorporate on-line component of DSA's and other in-house assessments
2.7	Design and create collaborative real world projects and units to demonstrate mastery of technology skills	Computer Applications teachers Media Education Consultant District Technology Education Consultant	On-going Commence 09/12/2019	2.7.1. Assessments of units uploaded/stored on virtual drive for district sharing 2.7.2. Use of digital assessment software suite 2.7.3. Units loaded to the CTECS OER Commons 2.7.4. Develop a structure for students feedback on lesson exemplars

Action Plan for Goal Area 2				
What Steps Will You Take?		***Who Will Be Responsible?***	***When?***	***How will you measure?***
2.8	Expand the use of simulations, collaboration environments and virtual worlds to engage and motivate learners and to assess complex skills and performances embedded in academic and trade/technology curricula	District Technology Education Consultant Assistant Superintendent for *Curriculum and Instruction* Content Education Consultants	On-going	2.8.1. Analysis of simulated assessments 2.8.2. Usage reports 2.8.3. Academic and/or Trade/technology steering committee meeting minutes 2.8.4. Directory of simulated assessments housed on the District OER/LMS
2.9	Review and modify district policies to ensure privacy and information protection that supports the use of assessments online including ongoing student learning, data gathering and sharing for continuous improvement with all relevant CTECS stakeholders	District Technology Education Consultant District Legal Counsel Superintendent Assistant Superintendent for *Data Management and Research* IT Staff	July 2020 (Biennially)	2.9.1. Policies about electronic communication and internet usage in relation to privacy of information and information protection are published in all relevant CTECS documents, i.e. district intranet/internet, student handbook, staff handbook

Goal 3: Connected Teaching and Learning

National Tech Plan	State Tech Plan
3.0 Teaching: Prepare and Connect *Professional educators will be supported individually and in teams by technology that connects them to data, content, resources, expertise, and learning experiences that enable and inspire more effective teaching for all learners.*	***Goal 3: Connected Teaching and Learning*** *Professional educators will be supported individually and in teams by technology that connects them to data, content, resources, expertise, and learning experiences that can empower and inspire them to provide more effective teaching for all learners.*
What will your district do over the life of this local Tech Plan to ensure that educators are prepared to teach 21st Century learners and are connected to technology resources that support teaching and learning?	

Action Plan for Goal Area 3

	What Steps Will You Take?	*Who Will Be Responsible?*	*When?*	*How will you measure?*
3.1	Provide training and demonstration opportunities for teachers regarding the effective use of digital technology support teaching and learning. Topics may include but are not limited to: data driven decision making; current research trends in academic and trade/technology education; *Frontline*; on-line assessment platforms; the use of access devices; innovative and advanced skill sets. Google for Education, Office 365	District Technology Education Consultant Assistant Superintendent for *Curriculum and Instruction* Professional Development Education Consultant Content Education Consultants Ad-Hoc Technology Committee and Tech Chairs	On-going	3.1.1. District Technology needs assessment data 3.1.2. District-wide Trimester assessment data 3.1.3. District high stakes testing data 3.1.4. CTECS Professional Development calendar offerings aligned to the District Technology needs assessment findings and District/School Improvement goals 3.1.5. Calendar offerings of RESC advanced technology professional development 3.1.6. School-based professional development committees and school-based technology committees calendar offerings aligned to the District Technology needs assessment findings, school improvement goals and specific staff needs 3.1.7. Post evaluations 3.1.8. CEU reports 3.1.9. District Professional Development Steering Committee meeting agendas/minutes 3.1.10. Speak UP Results 3.1.11. Frontline Evaluations 3.1.12. Technology Committee agenda minutes/agendas 3.1.13. Future Ready Schools Needs Assessment

Action Plan for Goal Area 3				
What Steps Will You Take?		***Who Will Be Responsible?***	***When?***	***How will you measure?***
3.2	Provide Universal Design for Learning professional development for teachers and staff on the use of assistive technology to ensure student accessibility to the general curriculum Provide administrative time for technology integration period, to coordinate technology integration and best practices. (District Technology Coaches TIPS)	District Technology Education Consultant Assistant Superintendent for *Curriculum and Instruction* Professional Development Education Consultant Special Education Consultants District Assistive Technology Teacher Pupil Services Staff	On-going	3.2.1. Special Education Consultant unit meeting agendas/minutes 3.2.2. CTECS Professional Development calendar offerings 3.2.3. Universal Design for Learning professional development agendas 3.2.4. Fronltine Evaluations 3.2.5. Supplemental instruction for Blended Learning Environments 3.2.6. Scheduled Administrative Period 3.2.7. Teacher led professional development 3.2.8. Quarterly meeting with IT Specialists
3.3	Ensure that all technology learning environments (TLE) have the technological resources to support 21st Century Learning Skills	District Technology Education Consultant School Technology Committee Chairpersons Superintendent Assistant Superintendent for *Curriculum and Instruction* Assistant Superintendent for *Data Management and Research* IT Staff	July 2019 Annually June 2020	3.3.1. Published Teaching Learning Environment model template for the academic and trade/technology learning environments 3.3.2. Prioritized budget requests for hardware and software needs for the academic and trade/technology learning environments 3.3.3. Published Teaching Learning Environment model template for the adult education learning environments

Action Plan for Goal Area 3				
What Steps Will You Take?		***Who Will Be Responsible?***	***When?***	***How will you measure?***
3.4	Expand the use of technology and virtual learning communities in the delivery of instruction for students and staff to support 21st Century learning skills Encourage a choice of devices appropriate to use the "bring your own device" and school provided devices	District Technology Education Consultant Assistant Superintendent for *Curriculum and Instruction*	July 2019/20	3.4.1. Published directory of CTECS teacher websites, virtual learning communities, and Moodle webpages on the district intranet and internet sites 3.4.2. CTECS staff members will embrace the blended learning class model 3.4.3. Staff and students will leverage the GAFE environment 3.4.4. Staff and students will also leverage resources from our Microsoft Campus agreement and office 365 3.4.5. Staff will leverage resources provided by their content consultant from the CTECS OER commons 3.4.6. Administrators will provide staff professional development on appropriate use of digital resources in the classroom
3.5	Promote and encourage the use of webinars, virtual learning communities and RESC on-line professional development workshops, google hangouts, or other online collaboration. Provide professional learning opportunities that allow teachers to communicate, collaborate, and learn from teachers in other locales using web-based tools and resources.	District Technology Education Consultant Professional Development Education Consultant All faculty and administrators	Annually	3.5.1. Promote webinar, virtual learning community and RESC on-line professional development offerings on the district's intranet site or via online learning platform 3.5.2. Collect webinar and RESC post evaluations 3.5.3. CEU reports 3.5.4. Professional Development Calendar 3.5.5. Professional development Committee/Technology Committee meeting agendas/minutes 3.5.6. District professionals are able to choose their own professional development path
3.6	Ensure continued access for all staff to technology best practices; exemplary lessons; and relevant instructional resources to support teaching and learning through virtual professional learning communities	District Technology Education Consultant Professional Development Education Consultant Content Education Consultants District Webmaster	On-going	3.6.1 Published directory of CTECS teacher websites, virtual learning communities, content (academic and trade/technology) and LMS/ websites on the district intranet and internet sites

Action Plan for Goal Area 3				
	What Steps Will You Take?	***Who Will Be Responsible?***	***When?***	***How will you measure?***
3.7	Revise Curriculum to accommodate and incorporate increasing numbers of web based learning experiences. Cloud based access to all curriculum documents and instructional tools for students and staff	District Technology Education Consultant Content Area Consultants Assistant Superintendent All Faculty and administrators	July 2019	3.7.1 District Curriculum revision rubric reflects Technology Integration 3.7.2 District Courses are specifically designed with digital components 3.7.3 Full online Courses, which are credit bearing are developed 3.7.4 Blended Learning environments are encouraged throughout the district 3.7.5 CTECS Curriculum Documents are created and stored on the CTECS OER Commons 3.7.6 LMS Systems are utilized in the classroom 3.7.7 1 to 1 initiatives leverage LMS and District digital resources, and measured by log on and usage reports 3.7.8 Professional development is given in the instructional strategies to deliver the digital models 3.7.9 Publish district curriculum revision cycle

Goal 4: Infrastructure for Teaching and Learning

National Tech Plan	State Tech Plan
4.0 Infrastructure: Access and Enable *All students and educators will have access to a comprehensive infrastructure for learning when and where they need it.*	***Goal 4: Infrastructure for Teaching and Learning*** *All students and educators will have access to a comprehensive infrastructure for learning when and where they need it.*
What will your district do over the life of this local Tech Plan to ensure that all students and educators will have access to a comprehensive infrastructure for teaching and learning?	

Action Plan for Goal Area 4

	What Steps Will You Take?	*Who Will Be Responsible?*	*When?*	*How will you measure?*
4.1	Implement the CTECS Technology Plan that supports the "meaningful use" of educational and information technology in the district through an articulation of definitions, goals, policies, and metrics	District Technology Education Consultant Superintendent Assistant Superintendent for *Curriculum and Instruction* Assistant Superintendent for *Data Management and Research* District Education Consultants School Technology Committee Chairpersons School Administrators IT Staff	On-going	4.1.1. Implementation of the CTECS Technology Plan 4.1.2. Review use policies to ensure they address the changing technologies for adoption by the CTHS Sub-board Committee and the Connecticut State Board of Education 4.1.3. Designated fixed percentage of annual operating budget for purchasing: network level version of hardware and software 4.1.4. Centralized acquisition of technology which employs a tiered purchasing model 4.1.5. Monitor property control inventory reports--semiannually (i.e. fixed assets) 4.1.6. Establish and document backup/retention policies for all CTECS digital data 4.1.7. Establish and document the use of staff and student-owned access devices in all CTECS schools through the *1 to 1 initiative.* 4.1.8.

Action Plan for Goal Area 4

	What Steps Will You Take?	*Who Will Be Responsible?*	*When?*	*How will you measure?*
4.2	Ensure that students and staff have broadband access to the internet and wireless connectivity in and out of school, i.e. webpages, virtual private networks, internet sites, Connecticut Education Network (CEN), PowerSchool	District Technology Education Consultant District Library/Media Education Consultant District Webmaster School Library/Media Specialists IT Staff	On-going	4.2.1. Connected all district workstations to the Connecticut Education Network (CEN) 4.2.2. Filtered internet access meeting Computer Information Privacy Act (CIPA) requirements for all staff and students 4.2.3. Review broadband access and wireless connectivity usage reports 4.2.4. Monitor connection speeds and resolve issues in a timely manner 4.2.5. Disseminate information (e.g. student achievement, operations, etc.) to enhance the ability of the district and schools to communicate and increase parental involvement through an online presence 4.2.6. Review Education Consultant Hardware survey results 4.2.7. Library/Media Center circulation statistics report 4.2.8. Promote the *1 to 1* initiative in all CTECS schools to increase the use of access devices among staff and students 4.2.9. Promote the expansion of the 1 to 1 roll out 4.2.10. Full implementation of blended learning across the district 4.2.11. Notification of key personnel during an interruption of service, planned outage, service window

Action Plan for Goal Area 4

	What Steps Will You Take?	*Who Will Be Responsible?*	*When?*	*How will you measure?*
4.3	Ensure all students and staff have access to technology resources, i.e. software, internet access devices, and resources for research Centralized cloud based storage for all district staff and students to provide adequate storage, back up space and remote access	District Technology Education Consultant District Library/Media Education Consultant District Webmaster School Library/Media Specialists IT Staff	On-going	4.3.1. Designated fixed percentage of annual operating budget for purchasing: network level version of hardware and software 4.3.2. Published criteria for obsolescence of technology resources as required by Bureau of Enterprise Systems and Technology (BEST) 4.3.3. Implement the obsolescence plan for replacement of technology resources as required by Bureau of Enterprise Systems and Technology (BEST) 4.3.4. Define minimum technology necessary to deliver the curriculum and adopt a plan with a timeline to equip each instructional space (e.g. computer labs, TLEs, Library/Media Centers, office areas) 4.3.5. Deploy hardware and software to create an always-available learning resources environment 4.3.6. Deploy hardware and software to support data driven decisions for student achievement and district business operations 4.3.7. Implement new technologies to assess students and facilitate the delivery of instruction 4.3.8. Employ assistive technologies to ensure equitable access for all students 4.3.9. Review Education Consultant Software and Access Device survey results 4.3.10. Library/Media Center circulation statistics report 4.3.11. Conduct yearly needs assessments for students, staff, community members, and parents 4.3.12. Measure the number of active cloud based users and capacity

Action Plan for Goal Area 4

	What Steps Will You Take?	*Who Will Be Responsible?*	*When?*	*How will you measure?*
4.4	Build and maintain capacity for an evolving infrastructure for learning (wired and wireless)	District Technology Education Consultant IT Staff BEST Staff CEN Staff Trade/Technology Education Consultants	On-going	4.4.1. Employ technology to address the styles of various learners to ensure the acquisition of knowledge and skills to access academic and trade/technology programs (e.g. Renaissance Learning, LASLinks, EDGE, etc.,) 4.4.2. Establish protocols for addressing bottleneck and access issues in a timely manner 4.4.3. Monitor network diagnostic and accessibility reports 4.4.4. Provide equitable staffing to ensure the maintenance of all hardware 4.4.5. Provide equitable resources to ensure that technology and infrastructure is operational, secure, and properly maintained 4.4.6. Provide equitable staffing to meet the needs of data collection and state reporting 4.4.7. Provide equitable resources and support to assist teachers in integrating technology into instruction 4.4.8. Publish CTECS Best Practices and share with RESCs and the Connecticut State Department of Education 4.4.9. Bureau of Enterprise Systems and Technology (BEST) and District Technology Education Consultant (DTEC) monthly meeting agenda/minutes 4.4.10. Trade Technology Advisory Committees (CTEAC) by school by content area meeting agendas/minutes 4.4.11. Provide hardware, software and device status report by school to school administration 4.4.12. District Technology Ad-Hoc Committee Meetings 4.4.13. Attendance of key stakeholder to regional/national conferences relevant to investigate emerging trends

Action Plan for Goal Area 4				
What Steps Will You Take?		***Who Will Be Responsible?***	***When?***	***How will you measure?***
4.5	Promote the use of open blended learning environments to augment face-to-face instruction; encourage student participation online (forums, databases, podcasts, etc.); and to assess learning	District Technology Education Consultant Assistant Superintendent for *Curriculum and Instruction* Content Education Consultants School Administrators	On-going	4.5.1. Designated fixed percentage of annual operating budget for purchasing: network servers 4.5.2. Identified Learning Management Systems in the delivery of academic and trade/technology curricula and assessments. 4.5.3. Establish protocols for addressing bottleneck and access issues in a timely manner 4.5.4. CTECS Education Consultants will create resources in multiple mediums to support blended learning

Goal 5: Productivity and Efficiency

National Tech Plan	State Tech Plan
5.0 Productivity: Redesign and Transform *Our education system at all levels will redesign processes and structures to take advantage of the power of technology to improve learning outcomes while making more efficient use of time, money, and staff.*	***Goal 5: Productivity and Efficiency*** *Our education system at all levels will redesign processes and structures to take advantage of the power of technology to improve learning outcomes while making more efficient use of time, money, and staff.*
What will your district do over the life of this local Tech Plan to maintain or redesign processes and structures to take advantage of the power of technology to improve learning outcomes while maintaining efficiency?	

Action Plan for Goal Area 5

	What Steps Will You Take?	*Who Will Be Responsible?*	*When?*	*How will you measure?*
5.1	Design, implement and evaluate technology-powered programs and interventions to ensure that students graduate from CTECS prepared for the workplace and citizenship	District Technology Education Consultant Superintendent Assistant Superintendent for *Curriculum and Instruction* Assistant Superintendent for *Data Management and Research* District Education Consultants School Administrators	On-going	5.1.1. District Technology Committee monthly meeting agendas/minutes 5.1.2. Monitor implementation and functionality of the CTECS Technology Plan 5.1.3. Schedules adjusted to accommodate the sharing of teacher resources, mentoring, instructional coaching, and medical needs 5.1.4. List of interactive community spaces within CTECS schools that have access to technology and wireless connectivity (e.g. tiered lecture hall, cafeteria, auditorium, etc.) 5.1.5. Recommended online services (e.g. google hangouts) and professional learning communities that will allow staff to interact virtually for professional development, data analysis or to share best practices in and out of the district 5.1.6. Central Office Education Consultants Council meeting agenda/minutes 5.1.7. Analyze CTECS Post Graduation survey results to track students 5.1.8. Trade Technology Advisory Committees by school by content area meeting agendas/minutes 5.1.9. Review Trade Technology Advisory Committees' recommendations for program improvements 5.1.10. Alignment to Connecticut Commission for Educational Technology (CET) Goals and Standards

Action Plan for Goal Area 5

What Steps Will You Take?		*Who Will Be Responsible?*	*When?*	*How will you measure?*
5.2	Leverage technology to improve learning	District Technology Education Consultant Assistant Superintendent for *Curriculum and Instruction* District Professional Development Education Consultant Content Education Consultants School Media Specialists	On-going	5.2.1. Promote the use of the Connecticut Education Network (CEN) 5.2.2. Promote the use of virtual databases 5.2.3. Published resource directory of state-provided data collection software, online offerings and curriculum warehouses 5.2.4. Implement RESC-recommended processes and practices to improve educational and information technology 5.2.5. Academic and Trade/Technology Unit meeting agendas/minutes 5.2.6. Library/Media Center circulation statistics report 5.2.7. Blended and Full Online courses 5.2.8. CTECS OER Repository
5.3	Employ the use of interoperability standards for content, student learning data and financial data to enable the collection, sharing, and analysis of data to improve decision-making at all levels in CTECS	District Technology Education Consultant Assistant Superintendent for *Data Management and Research* District Data Unit District Fiscal Unit IT Staff	On-going	5.3.1. Require policy language and procedures for the acquisition of data collection programs to be Schools Interoperability Framework (SIF) compliant and the ability to function on multiple operating systems and browsers 5.3.2. Review CTECS policies governing privacy of information in accordance with state law 5.3.3. Review district technology resources for SIF compliance 5.3.4. Identify those district technology resources not in compliance with SIF and mitigate

Action Plan for Goal Area 5				
What Steps Will You Take?		***Who Will Be Responsible?***	***When?***	***How will you measure?***
5.4	Use technology to manage CTECS costs and improve district policies	District Technology Education Consultant Superintendent Assistant Superintendent for *Curriculum and Instruction* Assistant Superintendent for *Data Management and Research* District Fiscal Unit District Legal Counsel	On-going	5.4.1. Collect and share strategies for cost saving 5.4.2. Collect and share strategies for improving productivity 5.4.3. Review policies and highlights those that may impede processes 5.4.4. Review district and school-based operational procedures to ensure efficiency and expediency 5.4.5. Implement RESC-recommended processes and practices to improve educational and information technology 5.4.6. Review of issues and concerns with a fiscal impact identified during monthly Bureau of Enterprise Systems and Technology (BEST) and District Technology Education Consultant (DTEC) meetings 5.4.7. Pursue technology grant opportunities to support academic and trade/technology programs and professional development 5.4.8. Yearly review of district subscriptions for cost benefits and relevance to district initiatives

Appendices

Appendix A: Technology Learning Environments

TECHNOLOGY LEARNING ENVIRONMENT			
	Automotive Technology	*Students successfully completing this course of study will be able to pursue a two year or a four year degree in the area of automotive or mechanical engineering, or other related fields and be able to immediately enter the workforce.*	
	Room Layout	***Theory Room***	***Trade/Technology Production Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access to digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓The teacher computer station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room and positioned directly next to the whiteboard at the front of the room. ✓All interactive whiteboards should be mounted centered in the room. The pull down screen should also be located centered in the room. ✓Student computer stations should be dispersed around the room to accommodate small clusters of students working in teams. These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	✓Student computer stations need to be positioned strategically around the trade/technology production area. ✓Student computer stations must be located close to car/truck bays for use while analyzing and troubleshooting. ✓The Shoplink software is specific to the automotive cluster. This software directly connects to the auto's internal computer, as well as, manufacturer website to assist with diagnosis and repair ✓Wireless Access points should be deployed for coverage in all trade technology areas.
	Hardware	✓1 Computer station –Teacher ✓6-8 Student computer stations located in the theory room ✓4 Computer stations minimum	✓ 1 Computer station –Teacher ✓ 4 Computer stations minimum
	Software.	✓Mitchell on Demand – Web based ✓ShopLink – Network version	✓ Mitchell on Demand – Web based ✓ ShopLink – Network version
	Peripherals	✓Interactive Whiteboard (SmartBoards) ✓Data Projection System ✓Surround sound speaker system	✓Laser printer

TECHNOLOGY LEARNING ENVIRONMENT			
	Automotive Collision Repair and Refinishing	*Students successfully completing this course of study will be able to pursue a two year or a four year degree in the area of automotive or mechanical engineering, or other related fields and be able to immediately enter the workforce.*	
	Room Layout	***Theory Room***	***Trade/Technology Production Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access to digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher computer station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room and positioned directly next to the whiteboard at the front of the room. ✓ All interactive whiteboards should be mounted centered in the room. ✓ Student computer stations should be dispersed around the room to accommodate small clusters of students working in teams. These computer stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	✓ Student computer stations should be positioned strategically around the trade/technology production area. ✓ Computer stations must be located close to car/truck bays for use while analyzing and troubleshooting. ✓ Computer stations in the Collision Technology trade area must be able to connect to the Mitchell on Demand website. ✓ The Shoplink software is specific to the automotive cluster. This software directly connects to the auto's internal computer, as well as, manufacturer website to assist with diagnosis and repair. ✓ Wireless Access points should be deployed for coverage in all trade technology areas.
	Hardware	✓ 1 Computer station –Teacher ✓ 6-8 Student computer stations ✓ 4 Computer stations minimum	✓ 1 Computer station –Teacher ✓ 4 Computer stations minimum
	Software	✓ Mitchell on Demand – Web based ✓ ShopLink – Network version	✓ Mitchell on Demand – Web based ✓ ShopLink – Network version
	Peripherals	✓ Interactive Whiteboard (SmartBoards) ✓ Data Projection System ✓ Surround sound speaker system	✓ Laser printer

TECHNOLOGY LEARNING ENVIRONMENT	**Bio Science Environmental Technology**	*Students successfully completing this course of study will be able to pursue a two year or a four year degree in the area of environmental technology or other related fields and be able to immediately enter the workforce.*	
	Room Layout	***Theory Room***	***Trade/Technology Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access to digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ All interactive whiteboards should be mounted centered in the room. ✓ Student workstations should be dispersed around the room to accommodate small clusters of students working in teams. These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	✓ Student workstations should be positioned strategically around the trade/technology production area. ✓ Workstations must be located close to close to the experiment tanks for use while analyzing and troubleshooting. ✓ Workstations in the Collision Technology trade area must be able to connect to the Mitchell on Demand website. ✓ Wireless Access points should be deployed for coverage in all trade technology areas.
	Hardware	✓ 1 Computer station –Teacher ✓ 10-12 Student computer stations located in the theory room	✓ 1 Computer station –Teacher ✓ 6 Computer stations minimum
	Software	✓	✓
	Peripherals	✓Interactive Whiteboard (SmartBoards) ✓DVD Unit ✓Data Projection System ✓Surround sound speaker system	✓ Laser printer

TECHNOLOGY LEARNING ENVIRONMENT			
	Carpentry	*Students completing this course of study will be able to pursue a two year construction technology degree or a four year engineering degree and other related fields as well as immediately entering into the workforce.*	
	Room Layout	***Theory Room***	***Trade/Technology Production Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ All interactive whiteboards should be mounted centered in the room. ✓ Student workstations should be dispersed around the room to accommodate small clusters of students working in teams. These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	✓ Student computer stations should be positioned strategically around the trade/technology production area located in the vicinity of the router ✓ Wireless Access points should be deployed for coverage in all trade technology areas.
	Hardware	✓1 Computer station –Teacher ✓6-8 Student computer stations located in the theory room ✓4 Computer stations minimum located near Router	✓ 1 Computer station –Teacher ✓ 4 Computer stations minimum
	Software	✓AlphaCam ✓CabinetVision ✓Thompson construction Print Reading ✓Basic Blue Print Reading	✓ AlphaCam ✓ CabinetVision ✓ Thompson construction Print Reading ✓ Basic Blue Print Reading
	Peripherals	✓Interactive Whiteboard (Mimio or SmartBoards) ✓Data Projection System ✓Surround sound speaker system ✓	✓ Laser printer

TECHNOLOGY LEARNING ENVIRONMENT

Computer Aided Drafting & Design/ Architectural Technologies	*Students completing this course of study will be able to pursue a two-year or four-year degree in architectural, structural, civil engineering, manufacturing or mechanical engineering or other related fields and be able to immediately entering into the workforce.*	
Room Layout	***Theory Room***	***Trade/Technology Production Room***
Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access to digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	The Theory room may be designed as a separate area than that of the trade/technology production room. If such is the case, the theory room will include: ✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ All interactive whiteboards should be mounted centered in the room. ✓ Student workstations should be dispersed around the room to accommodate small clusters of students working in teams. These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	If the trade/technology production area is designed with theory area included, then the components listed in the Theory Room must be installed in the instructional area of the room. Wireless Access points should be deployed for coverage in all trade technology areas.
Hardware	✓1 Computer station –Teacher ✓1 workstation located in the theory room	✓ 1 Computer station –Teacher ✓ 5 mobile devices ✓ 20 Student computer stations located on the shop floor
Software	✓Autodesk: Architectural Desktop; AutoCAD Revit Building; Inventor Professional; Inventor Professional; VIS	✓AutoCAD ✓Master CAM version
Peripherals	✓ Interactive Whiteboard (Smartboard) ✓ Data Projection System ✓ Surround sound speaker system ✓	✓ Laser printer ✓ Wide format Color Printer ✓ 3d printer

TECHNOLOGY LEARNING ENVIRONMENT			
	Culinary Arts/Baking	*Students successfully completing this program will be able to pursue a two year or four year degree in Culinary Arts and be able to immediately enter the workforce.*	
	Room Layout	***Theory Room***	***Trade/Technology Production Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ All interactive whiteboards should be mounted centered in the room. ✓ Student workstations should be dispersed around the room to accommodate small clusters of students working in teams. These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	✓ The production area will have technology dispersed minimally throughout the production area. The main focus of the technology placement will be in the staff/public dining room where orders for product can be processed. ✓ Wireless Access points should be deployed for coverage in all trade technology areas.
	Hardware	✓1 Computer station –Teacher ✓4 Student computer stations	✓ 1 Computer station –Teacher ✓ 4 workstations minimum
	Software	✓Publisher ✓Glencoe- Exam View ✓Culinary Chef	
	Peripherals	✓ Interactive Whiteboard (Smartboard) ✓ Data Projection System ✓ Surround sound speaker system	✓ Laser printer

TECHNOLOGY LEARNING ENVIRONMENT			
	Diesel & Heavy Duty Equipment Repair	*Students successfully completing this course of study will be able to pursue a two year or a four year degree in the area of automotive or mechanical engineering, or other related fields and be able to immediately enter the workforce.*	
	Room Layout	***Theory Room***	***Trade/Technology Production Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ All interactive whiteboards should be mounted centered in the room. ✓ Student workstations should be dispersed around the room to accommodate small clusters of students working in teams. These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	✓ Student computer stations should be positioned strategically around the trade/technology production area. ✓ Computer stations must be located close to car/truck bays for use while analyzing and troubleshooting. ✓ Computer stations in the Collision Technology trade area must be able to connect to the Mitchell on Demand website. ✓ The Shoplink software is specific to the automotive cluster. This software directly connects to the auto's internal computer, as well as, manufacturer website to assist with diagnosis and repair.
	Hardware	✓1 Computer station –Teacher / per side ✓6-8 Student computer stations located in the theory room ✓4 work stations minimum/per side	✓ 1 Computer station –Teacher ✓ 4 workstations minimum
	Software	✓Mitchell on Demand-Web based ✓ShopLink-Network Version	✓ Mitchell on Demand-Web based ✓ ShopLink-Network Version
	Peripherals	✓ Interactive Whiteboard (Mimio or Smartboard) ✓ Data Projection System ✓ Surround sound speaker system	✓ Laser printer

TECHNOLOGY LEARNING ENVIRONMENT			
	Criminal Justice	*Students successfully completing this course of study will have the necessary knowledge and skills to work effectively with children (birth to 5 years) in an early childhood setting.*	
	Room Layout	***Theory Room***	***Trade/Technology Production Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ The projector should be ceiling mounted centered in the room. Projection capacity through the use of a data projector can significantly increase the large group impact of the cluster. ✓ All interactive whiteboards should be mounted centered in the room. The pull down screen should also be located centered in the room. ✓ Student workstations should be dispersed around the room to accommodate small clusters of students working in teams. These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	✓ Computer stations will be placed around the production area in centers. ✓ These stations will be equipped with peripherals
	Hardware	✓ 1 Computer station –Teacher ✓ 8-10 student stations	Clustered stations placed around the center. 1 check in station for management system.
	Software		✓ Child Care Professional ✓ Reader Rabbit- series ✓ Jump Start Kindergarten ✓ Jump Start Preschool
	Peripherals	✓ Digital Camera ✓ Camcorders ✓ Color Laser Printer ✓ Interactive Whiteboard (Smartboard) ✓ DVD Unit ✓ Data Projection System ✓ Surround sound speaker system	✓ Digital Camera ✓ Camcorders ✓ Color Laser Printer ✓ At least 100” pull down screen ✓ Front Vented Equipment cabinet ✓ Laser printer ✓ Tablet devices

TECHNOLOGY LEARNING ENVIRONMENT			
	Electrical	*Students successfully completing this course of study will be able to pursue a two year or a four year degree in electrical engineering or other related fields and be able to immediately enter the workforce.*	
	Room Layout	***Theory Room***	***Trade/Technology Production Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ All interactive whiteboards should be mounted centered in the room. ✓ Student workstations should be dispersed around the room to accommodate small clusters of students working in teams. These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	Technology in placed throughout the production area. Use of the wireless network allows the production area to be configured in multiple scenarios. Wireless Access points should be deployed for coverage in all trade technology areas.
	Hardware	✓ 1 Computer station –Teacher ✓ 6-8 Student computer stations located in the theory room	1 Computer station –Teacher
	Software	**Thompson software to include:** ✓ Construction Print Reading; International Codes 2003; Blue Print; Mathematics for Electrical; Residential Construction ACA House wiring; Residential Construction ACA House wiring – Exam View; Delmar's Standard Textbook of Electricity	
	Peripherals	✓ Interactive Whiteboard (Smartboard) ✓ Data Projection System ✓ Surround sound speaker system	✓ Laser printer

TECHNOLOGY LEARNING ENVIRONMENT			
	Electromechanical Technology	*Students successfully completing this course of study will be able to pursue a two year or a four year degree in the areas of mechanical, electrical, or electronic engineering.*	
	Room Layout	***Theory Room***	***Trade/Technology Production Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ All interactive whiteboards should be mounted centered in the room ✓ Student workstations should be dispersed around the room to accommodate small clusters of students working in teams. These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	✓ The technology will be dispersed around the production area. ✓ Simulators will be attached to machines to create scenarios for students. ✓ Wireless Access points should be deployed for coverage in all trade technology areas.
	Hardware	✓ 1 Computer station –Teacher ✓ 6-8 Student computer stations located in the theory room	1 Computer station –Teacher
	Software	✓ LabVolt Simulators ✓ AutoCad	✓ LabVolt Simulators ✓ AutoCad
	Peripherals	✓ Interactive Whiteboard (Smartboard) ✓ Data Projection System Surround sound speaker system	✓ Laser printer

TECHNOLOGY LEARNING ENVIRONMENT			
	Electronics Technology/ Pre-Engineering	*Students successfully completing this course of study will be able to pursue a two year Engineering Technology degree or a four year Electrical Engineering degree.*	
	Room Layout	***Theory Room***	***Trade/Technology Production Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ All interactive whiteboards should be mounted centered in the room. ✓ Student workstations should be dispersed around the room to accommodate small clusters of students working in teams. These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	✓ The workstations in the trade area should be dispersed throughout the room footprint. ✓ Additional data and power drops should be dispersed through the remaining area of the trade room. This creates flexibility of the room layout for simulation set up and mock scenarios. ✓ Wireless Access points should be deployed for coverage in all trade technology areas.
	Hardware	✓ 1 Computer station –Teacher / per side ✓ 6-8 Student computer stations located in the theory room	✓ 1 Computer station –Teacher
	Software	✓ ETCAI ✓ Paralax; Paralax Support ✓ MultiSim ✓ UnltiBoard	
	Peripherals	✓ Interactive Whiteboard (Smartboard) ✓ Data Projection System ✓ Surround sound speaker system	✓ Laser printer

TECHNOLOGY LEARNING ENVIRONMENT

Merchandising & Entrepreneurship	*Students completing this course of study will be able to pursue a two or four year degree in entrepreneurship, merchandising, retail merchandising, or visual merchandising and be able to immediately enter the workforce.*	
Room Layout	***Theory Room***	***Trade/Technology Production Room***
Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ All interactive whiteboards should be mounted centered in the room. ✓ Student workstations should be dispersed around the room to accommodate small clusters of students working in teams. These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	. ✓ Computers with computerized will be attached: • to large format printers (to print digitally created clothing patterns) • tablets (for the production free hand clothing pattern designs to allow artistic expression to exist without being hampered by the technology) ✓ Students will also utilize the digital cameras/camcorders to create digital images of their creation and capture, electronically, shows or exhibitions highlighting their work.
Hardware	✓1 Computer station –Teacher ✓6-8 Student computer stations located in the theory room	✓1 Computer station –Teacher ✓1 to 1 ration computers attached to digital cutter machines ✓6-8 computers clustered in a pod-pattern making/design
Software	✓Publisher	✓ Publisher
Peripherals	✓ Interactive Whiteboard (Smartboard) ✓ DVD Unit ✓ Data Projection System ✓ Surround sound speaker system ✓ At least 100” pull down screen ✓ Front Vented Equipment cabinet	✓ Color Laser printer ✓ Large format color printer ✓ Tablet technology ✓ Digital Photo Printer ✓ Digital Camera/Camcorder

TECHNOLOGY LEARNING ENVIRONMENT	**Graphics**	*Students successfully completing this course of study will be able to pursue a two year graphics design degree at state colleges and universities or go on to a four year degree in graphics design.*	
	Room Layout	***Theory Room***	***Trade/Technology Production Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ All interactive whiteboards should be mounted centered in the room. ✓ Student workstations should be dispersed around the room to accommodate small clusters of students working in teams. These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics	✓ The production area shall have technology placed throughout. ✓ A cluster of computer stations grouped together in a lab setting where large group projects can be accomplished. ✓ Several smaller production areas with workstations are located near the peripheral devices necessary for the production work. ✓ Wireless Access points should be deployed for coverage in all trade technology areas.
	Hardware	✓ 1 Computer station –Teacher ✓ 6-8 Student computer stations located in the theory room	1 Computer station- Teacher 18-20 Computer stations - Student
	Software	✓ Adobe CC	✓ Adobe CC
	Peripherals	✓ Interactive Whiteboard (Smartboard) ✓ Data Projection System ✓ Surround sound speaker system	✓ Laser printer- Large - Color ✓ Laser Printer – Small – Color ✓ Digital Camcorder ✓ Digital Cameras ✓ Web Cams ✓ Wacom Tablets ✓ Large volume digital copy Systems

TECHNOLOGY LEARNING ENVIRONMENT

Hairdressing & Barbering	*Students completing this course of study will be prepared and qualified to work in salons or spas as a state of Connecticut licensed cosmetologist.*	
Room Layout	***Theory Room***	***Trade/Technology Production Room***
Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ All interactive whiteboards should be mounted centered in the room. ✓ Student computer stations should be dispersed around the room to accommodate small clusters of students working in teams. These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	✓ One computer station must be positioned closest to the door to accommodate incoming clients for processing of appointment and relevant client notations. ✓ Two computer stations are dispersed throughout the trade/technology production room. These computer stations are loaded with the Interactive Hair Design software and a digital image capture camera or video camera. The purpose of these stations is for students to digitally mock-up a customer's potential hair design and request. ✓ Wireless Access points should be deployed for coverage in all trade technology areas.
Hardware	✓ 1 Computer station –Teacher ✓ 6-8 Student computer stations located in the theory room ✓ 2 Work stations ✓ 10 iPad/Mobile Devices	✓ 1 Computer station –Teacher ✓ 3 Work stations ✓ Mobile Devices to manage client services
Software	Interactive Hair Design software Reception/Client Software HairMax	
Peripherals	✓ Interactive Whiteboard (Smartboard) ✓ Data Projection System ✓ Surround sound speaker system	✓ Color Laser printer ✓ Digital Cameras/Camcorder ✓ Web-Cams

TECHNOLOGY LEARNING ENVIRONMENT			
	Health Technology	*Students successfully completing this course of study will be able to pursue a two year or a four year degree or other private postgraduate private institutions in the health care field for training as a Licensed Practical Nurse (LPN), Registered Nurse (RN) or other health related fields, i.e., radiology or physical therapy and be able to immediately enter the workforce.*	
	Room Layout	***Theory Room***	***Trade/Technology Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ All interactive whiteboards should be mounted centered in the room ✓ Student workstations should be dispersed around the room to accommodate small clusters of students working in teams. These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	✓ The Computer workstations are located in different aspects of the trade technology production floor. ✓ A cluster of computers is located near a mock nursing station. ✓ Laptop computers are scattered throughout the bed area. These systems connect to the mannequins to create health scenarios for the students to master their skills. ✓ Mobile tablet devices are used to take patient vitals and manage client records. ✓ Wireless Access points should be deployed for coverage in all trade technology areas.
	Hardware	1 Computer station –Teacher 20 Student computer stations	1 Computer station –Teacher Mobile tablet devices

	Software	Studyware - Nutrition and Diet Studyware -phramacological Aspect Saunders Review VitalSim Thompson Medical Office Practice Thompson - Synpashere Thompson - Medical Office Simulation Buck - Medical Practice Adult Health Nursing Concepts and Skills Clinical Nursing Concepts and Skills Nurse ProCalc Maternity Mania Thomson - Medical Assisting - Administrative and Clinical Comp Glencoe - Health Science Technology Wallcur - PractiTUB PPD Wallcur - Nitro Patch Wallcur - Practi-Powder Wallcur - Herapin Wallcur -Lanox Wallcur -insulin Pack Wallcur -VaccneB Davis - Caring for Older Adults Davis - Nursing Leadership Management Davis - Understanding Medical Surgical Essentials of Anantomy and Physiology Thomson - Exam View -Human Biology Davis - Nursing Leadership Management -3rd edition Davis - Uniderstanding Surgery Davis - Fundamentals of Mental Health Davis - Fundamentals of Nursing Davis - Calculating Drug Dosages Davis - Drug Guide Prentice Hall - Core Concepts in Pharmacology NCLEX Review Delmars Nuirsing Fundamentals Davis - Calculating Drug Dosages PhysWhiz- Cardiac PhysWhiz - Diabetes ChartSmart	Studyware - Nutrition and Diet Studyware -phramacological Aspect Saunders Review VitalSim Thompson Medical Office Practice Thompson - Synpashere Thompson - Medical Office Simulation Buck - Medical Practice Adult Health Nursing Concepts and Skills Clinical Nursing Concepts and Skills Nurse ProCalc Maternity Mania Thomson - Medical Assisting - Administrative and Clinical Comp Glencoe - Health Science Technology Wallcur - PractiTUB PPD Wallcur - Nitro Patch Wallcur - Practi-Powder Wallcur - Herapin Wallcur -Lanox Wallcur -insulin Pack Wallcur -VaccneB Davis - Caring for Older Adults Davis - Nursing Leadership Management Davis - Understanding Medical Surgical Essentials of Anantomy and Physiology Thomson - Exam View -Human Biology Davis - Nursing Leadership Management -3rd edition Davis - Uniderstanding Surgery Davis - Fundamentals of Mental Health Davis - Fundamentals of Nursing Davis - Calculating Drug Dosages Davis - Drug Guide Prentice Hall - Core Concepts in Pharmacology NCLEX Review Delmars Nuirsing Fundamentals Davis - Calculating Drug Dosages PhysWhiz- Cardiac PhysWhiz - Diabetes ChartSmart

		PhysWhiz - Organs and GI PhysWhiz - Renal System PhysWhiz - Normal Pregnancy PhysWhiz - Gastrotestinal PhysWhiz - Respirtory Adult nursing and Skills Davis - Fundamental of mental nursing Davis - Caring for Older adults Davis - Understanding medical Surgical Davis- Fundamentals of Nursing Pearson- Core Concepts in Pharmacology Classroom Manager - Medical Terminology Classroom Manager - Med Term---for health professionals Ehrlich-Medical Terminology	PhysWhiz - Organs and GI PhysWhiz - Renal System PhysWhiz - Normal Pregnancy PhysWhiz - Gastrotestinal PhysWhiz - Respirtory Adult nursing and Skills Davis - Fundamental of mental nursing Davis - Caring for Older adults Davis - Understanding medical Surgical Davis- Fundamentals of Nursing Pearson- Core Concepts in Pharmacology Classroom Manager - Medical Terminology Classroom Manager - Med Term---for health professionals Ehrlich-Medical Terminology
	Peripherals	✓ Interactive Whiteboard (Smartboard) ✓ DVD Unit ✓ Data Projection System	✓ Surround sound speaker system ✓ Simulator mannequins

TECHNOLOGY LEARNING ENVIRONMENT	**Heating, Ventilation & Air Conditioning (HVAC)**	*Students successfully completing this course of study will be able to pursue a two year or a four year degree in electrical engineering or other related fields and be able to immediately enter the workforce.*	
	Room Layout	***Theory Room***	***Trade/Technology Production Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ All interactive whiteboards should be mounted centered in the room. ✓ Student workstations should be dispersed around the room to accommodate small clusters of students working in teams. These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	The HVAC production room is set up with mock station around the entire production area. Mobile tablet technology will be used to help student's diagnosis and troubleshoot scenarios. Wireless Access points should be deployed for coverage in all trade technology areas.
	Hardware	✓ 1 Computer station –Teacher / per side ✓ 6-8 Student computer stations located in the theory room ✓ 10 iPads/Mobile Devices	✓ 1 Computer station –Teacher
	Software	**Thompson software to include:** ✓ Construction Print Reading; Basic Blue Print Reading; Refrigeration and Air Conditioning; Residential Construction ACA HVAC; Residential Construction ACA HVAC – Exam View **Simutech software to include:** ✓ Oil Furnace Simulator; Air Conditioner Simulator; Commercial Refrigeration Simulator; Gas Furnace Simulator; Oil Furnace Simulator; Gas Furnace interface Simulator	**Simutech software to include:** Oil Furnace Simulator; Air Conditioner Simulator; Commercial Refrigeration Simulator; Gas Furnace Simulator; Oil Furnace Simulator; Gas Furnace interface Simulator
	Peripherals	✓ Interactive Whiteboard (Smartboard) ✓ Data Projection System ✓ Surround sound speaker system	✓ Laser Printer

TECHNOLOGY LEARNING ENVIRONMENT			
	Information Systems Technology	*Students successfully completing this course of study will be able to pursue a two year computer technology degree or a four year degree in the area of computer engineering, or other related fields and be able to immediately enter the workforce.*	
	Room Layout	***Theory Room***	***Trade/Technology Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ All interactive whiteboards should be mounted centered in the room. ✓ Student computer stations should be dispersed around the room to accommodate small clusters of students working in teams. These computer stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	Information systems production area will be able to be transformed based on the production need. All tables and chairs must not be fixed to the floor. Power must be installed in all locations including floor recessed. The computer stations, which consist of laptop, desktops and mobile technology, shall all be able to be operational simultaneously. A network lab formation can be formed and students wire and re-wire lab set up. Room layout allows for the configuration of different network within the production area. Wireless Access points should be deployed for coverage in all trade technology areas.
	Hardware	✓1 Computer station –Teacher ✓10 ipPads/Mobile Devices ✓Robots	✓ 1 Computer station –Teacher ✓ 18-20 Student computer stations ✓ Robots/Raspberry Pie
	Software	**MS Office Suite – Multiple Versions to include:** ✓Windows OS; Norton Antivirus; Norton Ghost; Coffee Cup; QuickBooks ✓Corel ✓Adobe® CC ✓Character Studio ✓Reactor ✓Visual Studio	**MS Office Suite – Multiple Versions to include:** ✓Windows OS; Norton Antivirus; Norton Ghost; Coffee Cup; QuickBooks ✓Corel ✓Adobe® CC; ✓Character Studio ✓Reactor Visual Studio Cisco Simulators

	Peripherals	✓ Interactive Whiteboard (Smartboard) ✓ Surround sound speaker system ✓ Color Laser Printer	✓ Large Format color printer ✓ Tablets ✓ Digital Photo Printer ✓ Digital Camera/Camcorder ✓ Cisco Routers ✓ Switches ✓ 3d Printers ✓ Fluke Network Equipment

TECHNOLOGY LEARNING ENVIRONMENT			
	Manufacturing Technology	*Students successfully completing this course of study will be able to pursue a two year or a four year degree in the area of manufacturing or mechanical engineering or other related fields and be able to immediately enter the workforce.*	
	Room Layout	***Theory Room***	***Trade/Technology Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ All interactive whiteboards should be mounted centered in the room. ✓ Student computer stations should be dispersed around the room to accommodate small clusters of students working in teams. These computer stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	✓ The student computer stations should be strategically placed in the vicinity of, the computerized lathes or desktop CNC machines throughout the trade/technology production room ✓ Wireless Access points should be deployed for coverage in all trade technology areas.
	Hardware	✓1 Computer station –Teacher / per side ✓6-8 Student computer stations located in the theory room	✓ 1 Computer station –Teacher / per side ✓ 4-6 Computer Workstations
	Software	✓AutoCad ✓Mastercam®	
	Peripherals	✓ Interactive Whiteboard (Mimio or Smartboard) ✓ Data Projection System ✓ Surround sound speaker system	✓ Laser printer ✓ Desktop CNC ✓ 3d printer

TECHNOLOGY LEARNING ENVIRONMENT	**Marketing, Management & Entrepreneurship**	*Students completing this course of study will be able to pursue a two-year or four-year degree in marketing, business management, finance or hospitality management and other related fields as well as immediately entering into the workforce.*	
	Room Layout	***Theory Room***	***Trade/Technology Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ All interactive whiteboards should be mounted centered in the room. ✓ Student computer stations should be dispersed around the room to accommodate small clusters of students working in teams. These computer stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	✓ The trade/technology production room is designed and laid out as a retail store front. ✓ Network Cash register will be positioned near the entrance/exit of the retail store front. Additional data jacks shall be dispersed around the area to allow for multiple room configurations. ✓ Wireless connectivity will be deployed for handheld devices and laptops. ✓ Wireless Access points should be deployed for coverage in all trade technology areas.
	Hardware	✓ 1 Computer station –Teacher ✓ 18-25 Student computer stations	✓ Network Cash register (in store area) ✓ 4 laptops
	Software	✓ Internet Explorer ✓ Microsoft Office Suite (Word, Excel, PowerPoint, ACCESS, Publisher)	
	Peripherals	✓ Interactive Whiteboard (Smartboard) ✓ DVD Unit ✓ Data Projection System ✓ Surround sound speaker system	✓ Laser printer/Color Laser Printer ✓ Digital Cameras/Camcorders ✓ Flatbed scanners ✓ Mobile Handheld Scanner

TECHNOLOGY LEARNING ENVIRONMENT			
	Masonry	*Students successfully completing this course of study will be able to pursue a two year or a four year degree in engineering or other related fields and be able to immediately enter the workforce.*	
	Room Layout	***Theory Room***	***Trade/Technology Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ All interactive whiteboards should be mounted centered in the room. ✓ Student computer stations should be dispersed around the room to accommodate small clusters of students working in teams. These computer stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	✓ The student computer stations should be strategically placed in the vicinity of the design area. ✓ Students will work with layout software to design and implement custom layouts. ✓ Wireless Access points should be deployed for coverage in all trade technology areas.
	Hardware	✓ 1 Computer station –Teacher ✓ 6-8 Student computer stations located in the theory room	✓ 1 Computer station
	Software	✓Career Safe ✓College Literature ✓TechnoBlock ✓Delmar Thompson ✓Google Sketch Up	
	Peripherals	✓ Interactive Whiteboard (Smartboard) ✓ Data Projection System ✓ Surround sound speaker system	✓ Laser printer ✓ 3d Printer

TECHNOLOGY LEARNING ENVIRONMENT			
	Media Production	*Students successfully completing this course of study will be able to pursue a two year or a four year degree in media production or communications or other related fields and be able to immediately enter the workforce.*	
	Room Layout	***Theory Room***	***Trade/Technology Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ All interactive whiteboards should be mounted centered in the room. ✓ Student computer stations should be dispersed around the room to accommodate small clusters of students working in teams. These computer stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	There are two production areas: The main production area is a lab layout with computer stations running along each outer wall. Open discussion areas are in the center of the room. The second production area is the video/sound booth (s). This is the main creation area for the video content. These rooms are located adjacent to each other and are a fully functioning video production booth. Wireless Access points should be deployed for coverage in all trade technology areas.
	Hardware	✓1 Computer station –Teacher ✓1 File server	✓1 Computer station –Teacher ✓18-20 Computers
	Software	✓MS Office Suite – Multiple Versions o Windows OS; Coffee Cup ✓Corel ✓Adobe® Content Server; Adobe CC	✓Character Studio ✓Reactor ✓Visual Studio o Audacity o Adobe CC
	Peripherals	✓ Interactive Whiteboard (Smartboard) ✓ DVD Unit ✓ Data Projection System ✓ Surround sound speaker system ✓ At least 100” pull down screen ✓ Front Vented Equipment cabinet	✓ Color Laser printer ✓ Large format color printer ✓ Tablets ✓ Digital Photo Printer ✓ Digital Camera ✓ Digital Camcorders

TECHNOLOGY LEARNING ENVIRONMENT			
	Sound Production Technology	*Students successfully completing this course of study will be able to pursue a two year music production degree or a four year degree in music or other related fields and be able to immediately enter the workforce.*	
	Room Layout	***Theory Room***	***Trade/Technology Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ The projector should be ceiling mounted centered in the room. Projection capacity through the use of a data projector can significantly increase the large group impact of the cluster. ✓ All interactive whiteboards should be mounted centered in the room. The pull down screen should also be located centered in the room. ✓ Student computer stations should be dispersed around the room to accommodate small clusters of students working in teams. These computer stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	There are two production areas: The main production area is a lab layout with computer stations running along each outer wall. Open discussion areas are in the center of the room. The other main production room is similar in set up as to the above except is outfitted with Apple hardware. The second production area is the sound booth (s). This is the main creation area for the video content. These rooms are located adjacent to each other and are a fully functioning digital audio production booth.
	Hardware	✓1 Computer station –Teacher ✓1 File server ✓1 NAS device	✓ 1 Computer station –Teacher ✓ 18-20 Computers each side of trade area
	Software	**MS Office Suite – Multiple Versions** ✓Windows OS; Coffee Cup ✓Corel ✓Adobe® Content Server; Adobe Pagemaker	✓Character Studio ✓Reactor ✓Visual Studio o Audacity
	Peripherals	✓ Interactive Whiteboard (Mimio or Smartboard) ✓ DVD Unit ✓ Data Projection System ✓ Surround sound speaker system ✓ At least 100” pull down screen ✓ Front Vented Equipment cabinet	✓ Color Laser printer ✓ Large format color printer ✓ Tablets ✓ Digital Photo Printer ✓ Digital Camera ✓ Digital Camcorders

TECHNOLOGY LEARNING ENVIRONMENT

Plumbing, Heating & Plumbing, Heating & Cooling	*Students successfully completing this course of study will be able to pursue a two year or a four year degree in engineering or other related fields and be able to immediately enter the workforce.*	
Room Layout	***Theory Room***	***Trade/Technology Room***
Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ The projector should be ceiling mounted centered in the room. Projection capacity through the use of a data projector can significantly increase the large group impact of the cluster. ✓ All interactive whiteboards should be mounted centered in the room. The pull down screen should also be located centered in the room. ✓ Student computer stations should be dispersed around the room to accommodate small clusters of students working in teams. These computer stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	✓ The student computer stations should be strategically placed in the vicinity of the design area. ✓ Students will work with layout software to design and implement layouts.
Hardware	1 Computer station –Teacher / per side 6-8 Student computer stations located in the theory room	1 Computer station –Teacher
Software	✓ Designing and Installation ✓ **Thompson Software to include:** Res. Con. Aca ; Res. Con. Aca. – Exam View; Mathematics for Plumbing and Pipe Fitters	
Peripherals	✓ Interactive Whiteboard (Mimio or Smartboard) ✓ DVD Unit ✓ Data Projection System ✓ Surround sound speaker system	✓ At least 100” pull down screen ✓ Front Vented Equipment cabinet ✓ Laser printer

TECHNOLOGY LEARNING ENVIRONMENT	**Tourism, Hospitality & Guest Services Management**	*Students successfully completing this course of study will be able to further their education at numerous colleges and universities across the country in order to obtain a two year or four year degree in travel tourism and hospitality management related fields.*	
	Room Layout	***Theory Room***	***Trade/Technology Production Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ The projector should be ceiling mounted centered in the room. Projection capacity through the use of a data projector can significantly increase the large group impact of the cluster. ✓ All interactive whiteboards should be mounted centered in the room. The pull down screen should also be located centered in the room. ✓ Student workstations should be dispersed around the room to accommodate small clusters of students working in teams. These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	✓ The production area is broken up into different sections: ✓ The first production area guests see upon entering the work area is the reception desk. This desk is completely outfitted with computer stations, printers, cameras, and barcode readers to effectively check in guest in hotel simulations. ✓ Mobile tablet technology is also used in scenarios of guest services. ✓ A secondary area for student production is in a lab setting. This lab allows the students to check and verify online booking locations, create marketing, materials and promotional goods. ✓
	Hardware	✓ 1 Computer station –Teacher ✓ 20 Student computer stations located on the shop floor	✓ 4 Computer station – Desk Check in ✓ 15-20 computer station in production area ✓ 5 mobile devices
	Software	✓ Saber ✓ Adobe CS ✓ Optima Guest Services	✓ Saber ✓ Adobe CS ✓ Optima Guest services
	Peripherals	✓ Camcorder ✓ Digital Camera ✓ Digital Signage	✓ Camcorder ✓ Digital Camera ✓ Digital Signage ✓ Color Laser Printer

TECHNOLOGY LEARNING ENVIRONMENT			
	Welding & Metal Fabrication	*Students completing this course of study will be able to pursue a two-year or four-year degree in mechanical engineering or other related fields and be able to immediately enter the workforce.*	
	Room Layout	***Theory Room***	***Trade/Technology Room***
	Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station located in the theory room, which is inclusive of the equipment cabinet, should be located in the front of the room should be positioned directly next to the whiteboard at the front of the room. ✓ The projector should be ceiling mounted centered in the room. Projection capacity through the use of a data projector can significantly increase the large group impact of the cluster. ✓ All interactive whiteboards should be mounted centered in the room. The pull down screen should also be located centered in the room. ✓ Student computer stations should be dispersed around the room to accommodate small clusters of students working in teams. These computer stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics.	✓ The student computer stations should be strategically placed in the vicinity of the design area. ✓ Students will work with layout software to design and implement custom layouts.
	Hardware	✓ 1 Computer station –Teacher / per side ✓ 6-8 Student computer stations located in the theory room	✓ 1 Computer station –Teacher
	Software	✓ Designing and Installation ✓ **Thompson Software to include**: Res. Con. Aca ; Con. Aca.– Exam; ✓ Mathematics for Plumbing and Pipe Fitters (same as above?)	
	Peripherals	✓ Interactive Whiteboard (Mimio or Smartboard) ✓ DVD Unit ✓ Data Projection System ✓ Surround sound speaker system	✓ At least 100” pull down screen ✓ Front Vented Equipment cabinet ✓ Laser printer

TECHNOLOGY LEARNING ENVIRONMENT

COMPUTER EDUCATION	*Students completing this course of study will demonstrate mastery of Word, Excel and Power Point and utilize Microsoft Publisher to design projects and products that will be exemplified in the senior capstone portfolio.*

Room Layout	
Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The workstations may be used by students to access all resources available on the network, including resources from the Internet, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics, as well as, all content area software. ✓ Instructional computer labs of 18-25 computers with scanners, color and laser printers, data projectors, and telecommunication capability in numbers sufficient to support the curriculum program; networked to the school LAN. ✓ Lab settings are very effective for large group instruction and for disseminating general introductory information. School wide network connectivity will provide access to additional printers, and digital resources. Projection capacity through the use of a data projector significantly increases the quality of large group instruction. Within the learning lab, the function(s) identified will determine hardware, software, peripheral, scheduling, professional development, and staffing needs. This model provides for a one-to-one student-to computer ratio.

Software	✓ Internet Explorer ✓ Microsoft Office Suite (Word, Excel, PowerPoint, Access, Publisher) ✓ Inspiration	✓ Google Earth ✓ Windows Movie Maker ✓ Cengage Learning System

	Student	***Teacher***
Hardware	✓ 6-8 Computer stations	✓ 1 Computer station

	Student	***Teacher***
Peripherals	✓ Interactive Whiteboard (Mimio or Smartboard) ✓ DVD Unit ✓ Mounted data projector ✓ Surround sound speaker system100” pull down screen	✓ Front Vented Equipment cabinet ✓ Laser Printer ✓ Digital Camcorders ✓ Digital Cameras ✓ Flatbed scanners

TECHNOLOGY LEARNING ENVIRONMENT

ENGLISH	*Students will demonstrate the ability to read a piece of literature and respond critically in writing; read and interpret information; and write using standard English conventions.*

Room Layout	
Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station, which is inclusive of the equipment cabinet, should be located in the front of the room with the actual unit placed close to the exterior wall. The projector should be ceiling mounted and centered in the room. All interactive whiteboards should be mounted centered in the room. The pull down screen should also be located in the center. ✓ The student computer stations should be clustered together against a single wall. A cluster of student computer stations will encourage the use of technology as a learning tool within the regular TLE. ✓ Projection capacity through the use of a data projector can significantly increase the large group impact of the cluster. ✓ These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheet, desktop publishing, and presentation graphics.

Peripherals	✓ Interactive Whiteboard (Mimio or Smartboard) ✓ DVD Unit ✓ Mounted data projector ✓ Surround sound speaker system	At least 100” pull down screen Front vented equipment cabinet

	Student	***Teacher***
Hardware	✓6-8 Computer stations	✓1 Computer station

	Student	***Teacher***
Software	✓Glencoe interactive Journalism ✓McGraw/Hill Art of Watching Films ✓Renaissance Learning (Accelerated Reader/STAR Reader)	✓ **Holt Software to include:** Elements of Literature; One Stop Planner; Power Notes; Power Notes-3rd Course; One Stop Planner– 3rd Course; One Stop Planner – Connecticut; Power Notes–4th Course; One Stop Planner 5th Course; One Stop Planner-World Literature; Power Notes – World Literature

TECHNOLOGY LEARNING ENVIRONMENT

HEALTH EDUCATION	*Students will understand and develop behaviors that promote lifelong health and wellness*

Room Layout	
Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station, which is inclusive of the equipment cabinet, should be located in the front of the room with the actual unit placed close to the exterior wall. The projector should be ceiling mounted and centered in the room. All interactive whiteboards should be mounted centered in the room. The pull down screen should also be located in the center. ✓ The student computer stations should be clustered together against a single wall. A cluster of student computer stations will encourage the use of technology as a learning tool within the regular TLE. ✓ Projection capacity through the use of a data projector can significantly increase the large group impact of the cluster. ✓ These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheet, desktop publishing, and presentation graphics.

Peripherals	
	✓ Interactive Whiteboard (Mimio or Smartboard) ✓ DVD Unit ✓ Data Projection System ✓ Surround sound speaker system ✓ At least 100” pull down screen ✓ Front Vented Equipment cabinet

Hardware	***Student***	***Teacher***
	6-8 Computer stations	1 Computer station

Software	***Student***	***Teacher***
	FitnessGram	Holt One Stop Planner -Lifetime Health Holt One Stop Planner -Lifetime Health - Test Generator FitnessGram

TECHNOLOGY LEARNING ENVIRONMENT

LIBRARY MEDIA/CENTER

Students will use information and technology effectively and be able to problem solve, think critically and apply related strategies to communicate and collaborate effectively.

Room Layout

Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room.

School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers.

Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information

The library Library/Media Center, located centrally within the school, combines the roles of today's library services, audio visual/ media department, and technology centers into one information resource center for teachers, students and the community.

A library Library/Media Center must be equipped with an automated catalog and circulation system; on-line digital technologies for research lab networked to school LAN and District WAN. In addition the Library/Media Center must have Internet access, standard computer tools, word processing, spreadsheets, desktop publishing, and presentation graphics, as well as, all content area software.

The Library/Media Center includes:

- ✓ ***Technology research stations*** including a network for telecommunications and digital resources which provide students and staff with access to rich sources of information for course work.
- ✓ ***Student workstations*** located throughout the library Library/Media Center with network or local access to applications software, which would provide students opportunities for research and completing assignments.
- ✓ ***A video control room*** (Houses the VBrick system) located within or in the vicinity of the Library/Media Center which would provide centralized video distribution throughout the building for the broadcast of instructional television, in-house productions, professional development activities and distance learning programming.
- ✓ **Library/Media Technology Center** Instructional computer labs of 18-25 computers with scanners, color and laser printers, data projectors, and telecommunication capability in numbers sufficient to support the curriculum program; networked to the school LAN.

  Lab settings are very effective for large group instruction and for disseminating general introductory information. Specific functions of learning labs may require access to one or more file servers. Within the learning lab, the function(s) identified will determine hardware, software, peripheral, scheduling, professional development, and staffing needs. This model generally provides for a one-to-one student-to computer ratio.

Video Distribution (as part of the Library/Media Center)

The library Library/Media Center will become the hub of video distribution technology with distance learning and educational access channel, and an in-school video distribution system originating from the an in-house production room, as well as, any other designated room for signal origination.

This system will provide several channels to broadcast to individual rooms, offices, or common area televisions cable TV channels such as: PBS, CNN, The Learning Channel, The History Channel, etc. The system would have the ability to broadcast live satellite programming, videotape or disk playback, DVD, the educational access channel, or a live event originating from either the distance learning room, the auditorium, or TLEs throughout the building. The distribution system can also be used for morning announcements and an ongoing electronic bulletin board of announcements throughout the day.

Peripherals

✓ Interactive Whiteboard (Mimio or Smartboard)	✓ Color Laser Printer

		✓ DVD Unit ✓ Mounted data projector ✓ Surround sound speaker system ✓ Large group pull down screen ✓ Front Vented Equipment cabinet ✓ Laser printer	✓ Digital Camcorders ✓ Digital Cameras ✓ Flatbed scanners ✓ Wireless Access points ✓ Portable Digital Audio/Video Players (Audio Books)
	Hardware	***Student***	***Teacher***
		✓ 18-20 Computer stations - technology learning center formation ✓ 2 Workstations for Card Catalog ✓ 2 Workstations for Administration ✓ Mobile laptop cart (24 stations) ✓ Mobile Ipod Cart ✓ Mobile IPAd Cart ✓ VBrick video distribution system ✓ 3 Workstations – Centers – (Wynn, Listening, Writing) ✓ Handheld Wireless Scanner ✓ USB Circulation Scanner ✓ Asset Inventory Security System ✓ 2 Video production workstations	1 Computer station
	Software	***Student***	***Teacher***
		✓	✓ Destiny® ✓ ICONN Databases ✓ Grolier Online

TECHNOLOGY LEARNING ENVIRONMENT

MATHEMATICS	*Students shall demonstrate the ability to solve multiple step mathematical problems that require demonstration of basic math operations including fractions, decimals and percentages and the use of algebraic equations; and explain in writing how they arrived at each answer.*

Room Layout	
Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station, which is inclusive of the equipment cabinet, should be located in the front of the room with the actual unit placed close to the exterior wall. The projector should be ceiling mounted and centered in the room. All interactive whiteboards should be mounted centered in the room. The pull down screen should also be located in the center. ✓ The student computer stations should be clustered together against a single wall. A cluster of student computer stations will encourage the use of technology as a learning tool within the regular TLE. ✓ Projection capacity through the use of a data projector can significantly increase the large group impact of the cluster. ✓ These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheet, desktop publishing, and presentation graphics.

Peripherals		
	✓ Interactive Whiteboard (Mimio or Smartboard) ✓ DVD Unit ✓ Mounted data projector ✓ Surround sound speaker system	✓ At least 100” pull down screen ✓ Front Vented Equipment cabinet ✓ Graphing Calculators ✓ Classroom Responder technology

Hardware	***Student***	***Teacher***
	6-8 Computer stations	1 Computer station

		Student	Teacher
	Software	✓ Geometers SketchPad ✓ Green Globs ✓ TI Smartview ✓ McDougal: Algebra 1 Test Generator; Worksheet Builder Geometry; Test Generator – Geometry; Geometry Concepts and Skills; Test Generator – Geometry; Algebra 2 - Test Generator ✓ Houghton Mifflin - ClassPrep ✓ Pearson: Test Gen; Elementary Statistics; Elementary Statistics -Lecture Series ✓ Sims Mathematics ✓ Aleks	Holt One Stop Planner -Lifetime Health Holt One Stop Planner -Lifetime Health - Test Generator FitnessGram

TECHNOLOGY LEARNING ENVIRONMENT

PHYSICAL EDUCATION	*Students will participate in physical activities and learning opportunities designed to maintain and enhance a healthy lifestyle.*

Room Layout	
Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The Gymnasium location will be wired for data and accommodate wireless access points where available. The Gymnasium will be conducive to large group instruction and presentation. This will accommodate both Physical Education classes and whole school functions. The wireless access points allow the teachers individual PDA's to sync with the FitnessGram database to track individual's student's progress. ✓ The teacher station should be located in the locker room office area. ✓ The PDA should be set up for each specific teacher as it coordinates to their specific class listing. All other peripherals should be located on a portable AV cart for easy storage when not in use in the gymnasium to protect against accidental damage. ✓ The projection screen, as well as, the interactive whiteboard should also be of portable construction for ease of use and storage. ✓ The Weight/Workout room will be provided with data drops to accommodate all peripherals connected to the network. Each peripheral machine is connected to the network to track the individual's student's use and progress with the equipment. ✓ Acquired workout devices must have the correct connection to work in conjunction with the software. Projection capacity through the use of a data projector can significantly increase the large group impact of the cluster.

Peripherals	
	Gym Location: ✓ Wireless access point(s) ✓ Portable: Interactive whiteboard (Mimio or Smartboard); Data projector; DVD Unit; Portable speakers; Portable 100" pull down screen **Weight /Workout Room:** ✓ Treadmill (s); Stair Machine(s) ✓ Bikes ✓ Elliptical Trainer (s)

Hardware	***Student***	***Teacher***
		✓ 1 Computer station –Teacher/per physical education instructor ✓ 1 Tablet device per instructor ✓ *1 Laptop*

Software	***Student***	***Teacher***
	✓ FitnessGram	✓ FitnessGram

TECHNOLOGY LEARNING ENVIRONMENT

SCIENCE	*Students shall demonstrate the ability to use scientific inquiry skills to explore world life problems using the content of biology, physics, chemistry and earth science; evaluate the information for validity and reliability; and use that information to support a position on a contemporary scientific issue.*

Room Layout	
Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station, which is inclusive of the equipment cabinet, should be located in the front of the room with the actual unit placed close to the exterior wall. The projector should be ceiling mounted and centered in the room. All interactive whiteboards should be mounted centered in the room. The pull down screen should also be located in the center. ✓ The student computer stations should be clustered together against a single wall. A cluster of student computer stations will encourage the use of technology as a learning tool within the regular TLE. ✓ Projection capacity through the use of a data projector can significantly increase the large group impact of the cluster. ✓ These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheet, desktop publishing, and presentation graphics.

Peripherals		
	✓ Interactive Whiteboard (Mimio or Smartboard) ✓ DVD Unit ✓ Data Projection System ✓ Surround sound speaker system	✓ At least 100” pull down screen ✓ Front Vented Equipment cabinet ✓ Scientific Probes

Hardware	***Student***	***Teacher***
	✓ 6-8 Computer stations	✓ 1 Computer station

Software	***Student***	***Teacher***
	✓ Glencoe – Chemistry –Student Works Plus ✓ Vernier Logger ✓ PASCO ✓ Prentice Hall: Biology; Physical Science; Student works; Student Works Chemistry; Student Works Chemistry –Plus	

TECHNOLOGY LEARNING ENVIRONMENT

SOCIAL STUDIES	*Students shall demonstrate the knowledge of history, civics and government, geography and economics, and the social sciences to understand and address global issues, make interdisciplinary connections and participate effectively in civic life through knowing how to stay informed and understanding governmental processes.*

Room Layout	
Sufficient power must exist to properly run all devices located in the room. Electrical outlets should be located near each data drop in the room. School wide and district wide connectivity infrastructures will provide access: of these systems will provide access digital resources and printers. Specific software programs, as indicated below, will be used to introduce, review, and/or reinforce content-related information	✓ The teacher station, which is inclusive of the equipment cabinet, should be located in the front of the room with the actual unit placed close to the exterior wall. The projector should be ceiling mounted and centered in the room. All interactive whiteboards should be mounted centered in the room. The pull down screen should also be located in the center. ✓ The student computer stations should be clustered together against a single wall. A cluster of student computer stations will encourage the use of technology as a learning tool within the regular TLE. ✓ Projection capacity through the use of a data projector can significantly increase the large group impact of the cluster. ✓ These stations may be used by students to access all resources available on the network, including resources from the Library/Media Center, the Internet, standard computer tools, word processing, spreadsheet, desktop publishing, and presentation graphics.

Peripherals	
	✓ Interactive Whiteboard (Mimio or Smartboard) ✓ DVD Unit ✓ Data Projection System ✓ Surround sound speaker system ✓ At least 100” pull down screen ✓ Front Vented Equipment cabinet

Hardware	***Student***	***Teacher***
	✓6-8 Computer stations	✓ 1 Computer station

Software	***Student***	***Teacher***
	✓ Prentice Hall: Exploring Primary Sources; Simulations Economics and Government; Passport to the World; Social Studies Skills Tutor; Student Express – American Government; Interactive Constitution ✓Glencoe - Skill Builder	

Appendix B: Technology Standards

Technology Standards

I. Creating the Environment for Learning

A. Demonstrate an understanding of research and potential applications of educational technology in learning.

Initial: Teacher is aware of software related to specific content areas and available technology tools.

Developing: Teacher uses available technology in creating lessons, student assignments, and other instructional materials.

Proficient: Teacher instructs the class on how to use specific content-related software, shares successful curriculum projects with colleagues, and acts as a resource to other teachers.

B. Apply problem solving strategies to issues involving teaching and learning with technology.

Initial: Teacher understands the support system within the building to address technology problems and issues.

Developing: Teacher is able to explain technology problems to troubleshooters, attempt basic solutions, and help students to minimize user errors.

Proficient: Teacher instructs other colleagues on solving technology problems, has back up plans when things go wrong, and can apply advanced troubleshooting strategies to address a technology issue.

C. Demonstrate an understanding of network capabilities and electronic communications.

Initial: Teacher uses network drives for document storage; teacher navigates to remote network locations to share and retrieve documents.

Developing: Teacher instructs students to save documents in a common network location; teacher can access student work from a common network location and electronically communicate feedback to students.

Proficient: Teacher develops and maintains a web site to post student or parent resources and for parents and students to retrieve information.

D. Demonstrate an understanding of emerging technologies

Initial: Teacher accepts new technologies as they arrive in the TLE; implements solutions introduced through emerging technologies.

Developing: Teacher integrates emerging technologies into the TLE to enhance the learning experience for students.

Proficient: Teacher researches emerging technologies and serves as an informational resource for others.

II. Creating Learning Environments and Experiences

A. Teachers will create learning experiences that align with district and state content standards.

Initial: Teacher is aware of different technologies that can be used to meet district and state content standards.

Developing: Teacher integrates various technologies that support district and state content standards into TLE instruction.

Proficient: Teacher works with others to align the technology standards with district and state guidelines.

B. Teachers will create new learning environments and develop new roles of teacher and learner.

Initial: Teacher is aware of how technology can be used in a variety of instructional settings and with a variety of methods.

Developing: Teacher creates different lessons that demonstrate an understanding of technology and its use in instruction.

Proficient: Teacher creates and implements an active, exploratory, and inquiry-based learning environment, rich with educational technology.

C. Teachers will use technology resources to better assess and understand students' needs and abilities in order to improve instructional practice and maximize student learning.

Initial: Teacher is aware of different methods of collecting and analyzing student data.

Developing: Teacher incorporates technology-based projects into the curriculum and uses a variety of technological methods to assess student work and collect and gather data.

Proficient: Teacher uses data collected in a variety of ways to assess student work and improve instruction.

D. Teachers will use technologies to provide individualized instruction to support students' needs.

Initial: Teacher is aware of different technologies available to assist in specialized instruction.

Developing: Teacher develops, designs, and implements instructional activities for a diverse student population that integrates technologies appropriate to students' needs.

Proficient: Teacher designs a learning environment that incorporates technology and considers all students' needs.

III. Productivity and Professional Practice

A. Teachers will use educational technology to communicate/collaborate with students, parents, and teachers.

Initial: Teacher communicates with students, parents, and colleagues through voicemail, memos, and letters; communicates sporadically through email.

Developing: Teacher communicates regularly with students, parents, and teachers through email; maintains a web site for communication with parents, students, and colleagues.

Proficient: Teacher assumes a leadership role by training colleagues on the uses of educational technology as a communication tool; utilizes distance learning opportunities to enhance the educational experience for students.

B. Teachers will use online resources to communicate/collaborate with the school community and the global community.

Initial: Teacher navigates to sites on the Internet that enrich the educational experience.

Developing: Teacher communicates with colleagues through professional web sites; utilizes the Internet as a tool to enhance craft.

Proficient: Teacher utilizes resources available through the Internet to create authentic learning experiences for students through collaboration with experts; collaborates with colleagues to foster the use of online resources in the TLE.

C. Teachers will use technology to collect and manage data related to teaching and learning.

Initial: Teacher inputs information (attendance, grades, etc) into PowerSchool; organizes lesson

plans electronically.

Developing: Teacher uses electronic grading program to collect, organize, and analyze student performance data; develops electronic portfolio of "best practices" for periodic use.

Proficient: Teacher trains colleagues on the use of electronic grade books to collect, organize and analyze data; implements electronic portfolios for student assessment and reflection.

D. Teachers will reflect on current practices, articulate goals, and develop strategies to improve understanding of educational technology and further the integration of technology into the TLE.

Initial: Teacher completes a self-assessment and identifies areas of strength and weakness; develops goals, with help, to increase proficiency with educational technology.

Developing: Teacher generates goals and strategies to enhance understanding of technology integration in the TLE; utilizes new learning to enrich the educational experience through technology.

Proficient: Teacher serves as a mentor to others as they develop their understanding of the role of technology in the TLE; models technological integration for others.

IV. Social, Legal, Ethical and Human Issues

A. Teachers will understand, model, and teach the legal and ethical practices regarding information and educational technology.

Initial: Teacher is aware of copyright laws, rights, and responsibilities and license agreements as well as district policies related to technology use.

Developing: Teacher practices netiquette and ethical and legal behaviors regarding technology use.

Proficient: Teacher leads professional development efforts to help other staff understand and apply ethical and legal information to the use of technology.

B. Teachers will model and teach safe, healthy practices of technology use.

Initial: Teacher understands basic information regarding ergonomics, equipment disposal and online safety.

Developing: Teacher applies ergonomics to the technology work environment, disposes of equipment properly, and monitors students' use of online sites.

Proficient: Teacher advocates for the healthy and safe use of technology by mentoring other staff and assisting in the development of district policies.

Appendix C: STaR Chart

CTECS

1. Hardware: **High Tech**
2. Connectivity: **Mid Tech**
3. Content: **High Tech**
4. Professional Development: **High Tech**
5. Integration and Use: **High Tech**

Based on an average of your responses, your school is at the **High Tech** level.

High Tech Educational Benefits:

- Improve higher-order thinking and research skills
- Greater information resources available for research and education from Internet and CD-ROM
- Most students/teachers able to communicate with parents, experts, other students and teachers outside the school

Summary of your answers:

	Questions:	Your answers:
1	How many students per instructional computer?	**(c)** 5 or less
2	How long does it take to receive technical support?	**(a)** Takes several days
3	What percent of instructional rooms and administrative offices connected to the Internet?	**(d)** 100% or more of all instructional rooms and administrative offices are connected to the Internet
4	What is the quality of your school's connection to the Internet?	**(d)** Direct connectivity in all TLEs with adequate bandwidth to prevent delays
5	What is the use and availability of other forms of hardware technology?	**(d)** There is broad use of a wide variety of other technologies such as VCRs, cable TV, telephones, voicemail, random access video, personal digital assistants, two way video conferencing, projection devices, digital cameras, scanners, portals, calculators, thin clients, servers, etc.
6	What forms do delivery and format of professional development take?	**(b)** *Trainer-led instruction *Embedded help within applications
7	What percent of the technology budget is allocated to professional development?	**(a)** Less than 10%
8	What is the understanding and use of digital content by educators?	**(b)** *100% at adaptation phases *Some begin to use with students

13	What is the content budget allocation to purchase digital content?	**(a)** Use some supplemental instructional materials funds only
9	Software format:	**(d)** Full range of digital content and tools structured to support production and collaboration
10	What is the role of the role of educator and degree to which digital content is integrated into instruction?	**(c)** * Teacher facilitated in local or distant TLEs *Fully integrate into instruction and use for research, planning, multimedia presentations and simulations, and to correspond and communicate
11	Do the students employ digital content to enhance learning?	**(c)** Use for research, to solve problems, to analyze data, to collaborate and to correspond with experts and to become content producers
12	What percentage of students are using digital content and what is their frequency of use?	**(a)** *50% or more *Weekly
14	How does technology help student achievement and 21st century skills?	**(d)** Demonstrate improved student achievement and mastery of the full range of 21st century skills
15	What percent of your school or district aligns standards, curriculum, assessment and/or uses technology for continuous improvement?	**(d)** *100% align standards, curriculum and assessment using technology *100% monitor and measure results to support teaching and learning and link to continuous improvement
16	What percent of your school or district integrates digital strategies into assessment and/or measures 21st century skills?	**(d)** *100% integrate digital strategies in assessment *Measure 100% of the entire range of 21st century skills *Technology evaluates student mastery in multiple formats and sets ever more challenging experiences
17	What percent of students has continuous access to technology?	**(b)** *Can access Internet at times other than school hours *All teachers are appropriately trained to integrate technology
18	How is research used?	**(c)** *100% use external research and apply appropriately *100% conduct internal research on program effectiveness *100% use IT in TLEs and administrative planning to collect and manage data to improve current operations
19	How do administrators use technology?	**(d)** *Use technology to set policies, procedures, analyze performance, report and communicate with constituencies *Use technology to manage continuous improvement
20	How do parents and the community use technology?	**(c)** *Communicate two-way via email, and privacy protected web tools, e.g., to access some school information and resources from home

Appendix D: enGuage Survey

iste BILL & MELINDA GATES foundation PRINT PROFILE

Assessment Results

Print your results using the print button at the top of the page. Your district profile cannot be retrieved after leaving this session. Be sure to print your profile before closing this window.

If there is an area from the TSI rubric for which you were particularly interested in obtaining recommendations but does not appear on your results above? Because you've obtained a profile of your district or school you are eligible to view all possible recommendations. Click here to view all possible recommendations — this links to a page that is restricted only to those who have completed the profile.

Technology Profile and Action Plan for Improvement
Prepared on 12/8/2011 for:
Joe Campbell
Connecticut Technical High School

Overall Result Summary
According to the Technology Support Index (TSI) your system is considered "Satisfactorily Efficient" requiring limited improvements. The "Satisfactory Efficiency" level of development refers to a system that is doing a very good job of support in many areas. Improvements in a number of areas will enhance the organizational capacity to effectively implement technology.

Following is your technology profile and action plan for improvement, by domain:

District Profile

1 Equipment Standards

	Low Efficiency	Moderate Efficiency	Satisfactory Efficiency	High Efficiency	Impact
Cycling of Equipment	No, we do not have a replacement cycle.	***Yes, we replace computers every 5-7 years.***	Yes, we replace computers every 4-5 years.	Yes, we replace computers every 3 years.	Significant - Requires a strategic organizational and financial commitment
Brand Selection	The brand purchased is up to the individual school.	There is a brand recommendation list, but I am able to easily purchase non-standard equipment AND the brand changes frequently.	There is a brand recommendation list with 1-2 brands, but I am able to easily purchase equipment that is not on the list.	***We have 1-2 specific brands that we purchase over a multi-year period. All purchases are made from that brand.***	Neutral - Savings can be gained with multiple year contracts.
Model Selection	We can select any model within a brand or manufacturer.	A model line is defined, but many choices are provided in that line.	There are 3-5 models that we can select from for purchase.	***Specific models from a brand are defined and are limited one or two models with few variations.***	Neutral
Platform	Two or more platforms are supported in the district, and in any given school individuals are given platform choice and multiple platforms are found.	Two or more platforms are supported in the district, but platform decisions are made at the school level and most equipment at any given school is one platform.	***Two platforms are supported in the district, but one platform is predominantly used with a second platform limited to specific program areas or instructional applications.***	Only one platform is allowed regardless of application or impact.	Neutral - Savings can be gained with a single platform

Standard Operating System (OS)	Four or more with all operating systems supported.	Three, with older equipment either migrated or not supported.	Two, with most equipment migrated to the most recent OS.	***One, with all equipment migrated to the standard OS.***	Moderate - Keeping a consistent OS with new purchases has no cost implications. Migrating existing machines to a current operating system can have moderate costs to purchase the new OS and upgrading hardware to run it.
Application Software Standard	A supported software list has not been adopted, and users can install any software.	Users are able to install titles that are not on the district list, and will receive limited support.	Users are able to install titles that are not on the district list, but will not receive any support.	***A software application list has been adopted and only those software titles on the list are permitted on school computers.***	Neutral
Donated Equipment	We accept any donated equipment.	***Equipment is accepted if it meets minimum performance requirements. Brands and age are variable.***	Equipment is accepted if it meets specific performance requirements, is less than three years old, and matches the brand(s) of the district.	Equipment is accepted if it meets specific brand, model, and performance requirements and is less than two years old. Cash donations are encouraged instead of equipment.	Neutral
Granted Equipment	All granted equipment is accepted.	Grant equipment is accepted regardless of brand and specification, but the district is consulted about standards.	The technology department approves grants involving technology equipment before they are submitted, and standardization is encouraged but is not consistently enforced.	***All equipment from grants must meet district brand and performance specifications or it is not allowed.***	Neutral
Peripheral Standards	No peripheral standards are set.	Peripherals are standardized by brand, but models within the brand are not and the list changes frequently.	Peripherals are standardized by brand, but many models are allowed and are typically consumer rated.	***All equipment is standardized on a small number of brands and models with equipment that is rated for industrial/school use.***	Minimal - Industrial versions of peripherals are more costly, but are typically balanced with longevity and reduced support costs.
Surplus Practice	***Surplus equipment is used until it is no longer functional and is supported.***	Surplus equipment is supported by district personnel, but as a low priority.	Surplus equipment is no longer supported by district personnel, but can be used by schools.	Surplus equipment is taken out of service when it reaches the replacement age, even if it still works.	Neutral
Break/Fix Agreements (Warranties)	No additional warranties are pursued beyond the standard warranty (1 year).	***Extended warranties are purchased for computers only but don't cover the life of the equipment and doesn't include peripherals (3 years, computers only).***	Extended warranties are purchased in addition to the standard warranty on computers and peripherals but don't cover the life of the equipment (3 years, all equipment).	Warranties are purchased to cover the life of the equipment (5 or more years).	Moderate to High - Warranties beyond 3 years can be expensive
Security Procedures	Security guidelines are loosely defined or do not exist resulting in substantial vulnerabilities.	Fairly secure guidelines are in place but are not closely followed.	Fairly secure guidelines are in place and followed, but more stringent guidelines would provide a more secure environment	***Very secure guidelines and practices are in place and are consistently practiced including limited administrative access to machines, password***	Neutral - Most organizations have security tools at their disposal, but often under utilize them.

			(e.g. password rotations, etc.).	***rotations, and "strong" passwords (letters and numbers).***	
Security Hardware and Software	No firewall or software security standards are in place.	A firewall is in place but ports are commonly opened. Software security standards are limited to promises by the vendor with limited auditing activity.	A firewall is in place with some opening of ports. Software security audits are in place for major systems with periodic security audits.	***A firewall is in place and opening of ports is very limited. Software security standards are in place for all software along with periodic security audits.***	Minimal to Moderate

Domain Result Summary: According to the TSI your Equipment Standards (Domain 1) is considered "Satisfactorily Efficient" requiring limited improvements. The "Satisfactory Efficiency" level of development refers to a system that is doing a very good job of support in many areas. Improvements in a number of areas will enhance the organizational capacity to effectively implement technology.

Recommendation: The support costs for technology equipment rise exponentially when it is left in service beyond its normal expected life. Most school districts continue investing in older technology equipment even at extraordinary cost and limited capability because a systematic replacement cycle has not been adopted. An adopted cycle (3-5 years), either through equipment leasing or by purchase and replace is recommended for your school district.
Cost: Significant
Resources: School districts committed to the use of technology are adopting replacement cycles to avoid obsolescence. Lake Washington School District (www.lkwash.wednet.edu) adopted a 5-year cycle and 4:1 student to computer ratio for their entire district. Tucson Unified School District (www.tusd.k12.az.us) adopted a replacement cycle through a leasing program called Eduflex replacing all equipment every 3 years (www.compaq.com/education/k12/success/tucsonunified.html). Most manufacturers (e.g., www.compaq.com, www.apple.com) offer leasing programs.

Recommendation: Decades of funding issues in schools has created a culture that uses every resource to the very end of its life. Unfortunately with technology when equipment has reached the end of its reasonable life it begins to cost the district enormous resources to keep it in service. Even if no support is provided, staff time for troubleshooting and other indirect resources are substantial. Like textbooks that are replaced and surplussed on a cycle, technology should be surplussed after its usable life even if the equipment may still work. This strategy can be challenging for districts that have a culture of extreme frugality or do not have an adopted upgrade cycle.
Cost: Neutral

Recommendation: Corporate partners and well-intentioned citizens want to help under funded schools by donating used technology. Unfortunately in many cases the used technology actually costs the school district significantly due to upgrades required and non-standard equipment that requires support. Further, many educational software applications, including those for lower grades, actually require more technical capability than many business applications. It is recommended that strong donation guidelines be in place requiring that all donations meet district brand, model, and specification guidelines and are less than 2 years old.
Cost: Neutral
Resources: www.siia.net/divisions/education/donatecomp.asp

Recommendation: Most technology companies offer standard equipment warranties of 1-3 years. Equipment warranties save district support costs both in time and real dollars. In some cases a good warranty program can actually generate revenue for the district if they are a self-supporting warranty organization and receive warranty reimbursements. A good warranty program ensures access to equipment, specific expertise and timely service. At the time of purchase most companies will provide and extended warranty option. It is recommended that a district consider purchasing agreements that include a warranty matching the expected service life of the equipment.
Cost: Moderate to High

Recommendation: There is undisputed evidence that the support of multiple platforms is more costly in terms of real costs and time. In school districts where much support is informal through colleagues helping each other, multiple platforms in a building or district reduces the ability to take full advantage of informal support. Further, technical staff requirements are significantly higher typically requiring a larger staff

or decreased service. A single platform is strongly recommended to provide efficient support.
Cost: Neutral

2 Staffing and Processess

	Low Efficiency	Moderate Efficiency	Satisfactory Efficiency	High Efficiency	Impact
Organizational Structure	The technology support comes from multiple points within the organization, and reporting is not functionally logical. Cross-functional collaboration is difficult or non-existent.	The reporting structures are difficult to identify, and direction comes from multiple points in the organization. Cross-functional collaboration exists.	The technical support functions and instructional technology functions report differently, but each unit is cohesively organized and there is effective communication between units.	***All of the technology functions report through the same unit in the organization, providing for a logical chain of command and communication structures.***	Neutral
Contracted Primary Support	***No, outside support is not used as the primary support strategy in the district.***	Yes, all support is contracted out, but the performance specification is written to personnel minimums, not a performance contract.	Yes, all support is contracted out and written to a performance specification requiring no more than a 5 day turn around on technical issues.	Yes, all support is contracted out and written to a performance specification requiring no more than a 72-hour turn around on technical issues.	High
Contracted Supplemental Support	***No, contracted support is not used.***	Yes, contracted support is used for emergencies but is not built in as a planned strategic support strategy.	Yes, contracted support is used as a part of the overall strategy but has not been closely evaluated to determine the most strategic places to use this support.	Yes, contracted support is used strategically as a part of the overall strategy for complex problems or in areas where savings/efficiencies can be easily realized.	Moderate
Staffing to Computer Ratio	***Our computer to technician ratio is over 250:1.***	Our computer to technician ratio is between 150:1 and 250:1.	Our computer to technician ratio is between 75:1 and 150:1.	Our computer to technician ratio is less than 75:1.	High
Formula-Driven Technology Staffing	Staffing formulas are not used or considered.	Formulas for staffing are considered but are limited in scope and are not used to drive staffing.	***Comprehensive formulas have been developed considering multiple dimensions of the environment but are only used as a guide and do not drive staffing.***	Comprehensive formulas have been developed and drive staffing as a normal part of operations. Formulas include multiple dimensions of the environment.	Moderate to High - Depending upon the nature of the formula, over time additional staffing is typically generated unless the desired computer penetration has been accomplished.
Certification of Technical Staff	***Certification is not a priority in the organization and concerns are raised about time away from the job to pursue certification.***	Technical staff is encouraged to become certified, but no support is provided toward certification.	Some technical staff is certified in appropriate areas, others are involved in district supported programs toward certification.	Most technical staff is certified in appropriate areas (e.g., Cisco, MCSE, etc.). New certification is encouraged and supported.	Minimal to Moderate
Differentiated Job Descriptions	Technical support employees do it all; redundancies and	***Technical support employees do it all, but redundancies***	Some differentiation in jobs has occurred, although assignments	Job descriptions are fully differentiated creating specialization and	Neutral

	inefficiencies are created as a result.	***are not created due to small size and/or staffing levels.***	are not provided based upon skill-set competencies.	efficiencies, and a clear avenue for support.	
Technician Retention	Technical staff turnover is very high; employee satisfaction is low.	Technical staff turnover is high due to other employment opportunities; employee satisfaction is fair.	Technical staff turnover is moderate (excluding retirement); employee satisfaction is high.	***Technical staff turnover is very low (excluding retirement); employee satisfaction is very high.***	Minimal
Competitive Compensation	Technical positions are poorly competitive, offering compensation in the bottom 50% of equivalent positions in the area.	Technical positions are moderately competitive, offering compensation in the 50th to 75th percentile of equivalent organizations in the area.	***Technical positions are competitive, offering compensation in the 75th to 90th percentile of equivalent organizations in the area and offer competitive non-compensation benefits.***	Technical positions are very competitive; offering compensation in the 90th percentile of equivalent organizations in the area and, in some cases, compete with private businesses for talent.	Moderate to High
Escalation Process for Technical Issues	No escalation process is in place, and the path for resolution is unclear.	A clear path for resolution is in place, but no escalation process is recognized.	An escalation process is in place with two steps of escalation, and significant crossover between levels.	***A well-defined escalation process is in place, with three or more steps of escalation, and a clear path for resolution.***	Minimal
HelpDesk	***No HelpDesk support is provided.***	A HelpDesk is provided for staff but is not fully staffed. The HelpDesk is used for emergencies only and is not used as first line of defense.	A central HelpDesk is in place, but the organizational culture has not adopted the HelpDesk systemically.	A central HelpDesk is in place with trained HelpDesk staff, and a culture of using the HelpDesk as the first line of defense is pervasive.	Minimal to Moderate
Use of Online Knowledgebase for Technical Help	***Staff seeks no online help due to both availability of resources and district culture.***	Some staff seeks online help, but the behavior is not pervasive and resources are limited.	Many staff seek online help, but not as a first line of defense.	Most staff seeks help from an online knowledgebase as their first line of defense for most issues.	Minimal to Moderate
Software Support Protocols and Standards	No list of supported software is provided for users.	***A list of supported software is provided, but no differentiated processes are provided for limited support products.***	A list of supported software is provided with differentiated processes, however users and staff do not follow them closely.	A list of supported software is provided, with clear differentiated processes for each set of software that are consistently used.	Neutral
New Equipment Deployment	The local school staff is responsible for the deployment of new equipment.	The regular technical staff manages all aspects of new equipment deployment resulting in a reduction in regular service.	***Additional help (internal or by contract) is utilized for imaging and tagging of new equipment, but setup is the responsibility of the regular technical staff creating some delays in regular technical service.***	Additional help (internal or by contract) is utilized for all aspects of new deployment resulting in no disruption to regular technical support services and the instructional program.	Moderate
Documented Procedures	***Little or no documentation exists***	Some documentation	Documentation exists for technical tasks but	Documentation exists for most technical tasks and is	Minimal to Moderate

	for technical tasks, requiring users and technical staff to invent their own solutions.	exists for technical tasks but is not widely shared or used. Most documentation is limited to few technical staff only.	is poorly written and is not systematically updated as procedures are developed.	used by most user groups. Well-written documentation production is a normal part of operations.	
Support by Teachers	Teachers and librarians provide all of the technical assistance in the building.	Teachers and librarians provide much of the technical assistance in the building with release time or stipend.	Teachers and librarians serve as the contact point, and perform some of the technical work in conjunction with technical staff.	***Teachers and librarians are used as the contact point in the building but do not perform technical support work.***	Neutral
Student Support	Students provide support for school in an ad-hoc manner due to limited district support.	Students are used extensively, in an official capacity, and supplant district support.	***No student support is provided.***	A curricular program is designed to train students in technical support. They support district technology, but in a peripheral way as part of their instructional program only.	Neutral

Domain Result Summary: According to the TSI your Staffing and Processess (Domain 2) is considered "Moderately Efficient" requiring attention and improvement. The "Moderate Efficency" level of development refers to a system that has some areas of excellence, but typically isolated and limited in implementation. While there is some good support in place, improvement will be required to overcome technology challenges

Recommendation: Certainly the most challenging (and costly) issue related to technology support in schools is staffing. Most private industries staff technical support with a technician for every 50 to 100 computers. School districts, on the other hand, will commonly see ratios of 250:1 or greater. It is recommended that technology staffing is prioritized to ensure that downtime is minimized and that staff and students can readily depend upon the district's technology.
Cost: High

Recommendation: School districts are finding that under certain circumstances completely outsourcing a function of the organization is not only desirable but preferred. By doing this, it allows the school district to concentrate on its core competency, educating children. Technical support if managed appropriately can be effectively outsourced providing an efficient and effective technology support strategy.
Cost: High

Recommendation: The most efficient and effective support practice used in industry is a HelpDesk for the first line of defense. The HelpDesk centralizes the intellectual capital of the organization and allows for efficient deployment of technical resources. Even in small school districts, the helpdesk is an essential component of an effective support system. The development and effective use of a technology HelpDesk is strongly recommended.
Cost: Minimal to Moderate

Recommendation: A large percentage of technical issues that arise are often simple in nature. In most cases, with the right information and a culture that promotes minimal troubleshooting, users can help themselves for many technical problems. An easy to use and searchable knowledgebase is critical to empower users to solve the simple problems themselves. The more effective knowledgebase implementations are those that grow with the organization and are populated by staffs that are solving problems. To more effectively use staff time and resources, the purchase and use of an on-line knowledgebase is strongly recommended.
Cost: Minimal to Moderate

Recommendation: Professional certification is important to develop internal expertise that is both efficient and effective. While certification will not guarantee success, it does provide increased expertise, access to highly technical resources, and a culture of professionalism that will encourage employees to excel. It is recommended that certification is an integral component of hiring and professional development for

technical staff.
Cost: Minimal to Moderate

3 Professional Development

	Low Efficiency	Moderate Efficiency	Satisfactory Efficiency	High Efficiency	Impact
Comprehensive Staff Development Programs	There is no formal staff development program in place. Training is provided infrequently, and the organization depends upon individuals' own motivation to build expertise.	***A staff development program is in place but is limited, voluntary, and uses a single dimension in its delivery.***	A staff development program is in place but is not comprehensive in nature in that it does not impact all staff and does not offer the depth required to change the organization.	A comprehensive staff development program is in place that impacts ALL staff. The program is progressive in nature, and balances incentive, accountability, and diverse learning opportunities.	High
Online Training Opportunities	Online training opportunities do not exist.	***Online training opportunities exist but are limited in scope and are available to a limited number of employees.***	Online training opportunities are available for staff onsite and remotely but are limited in their offerings.	Online training opportunities are provided for staff both onsite and remotely, and represent a diversity of skill sets.	Minimal to Moderate
Just-in-time Training	No just-in-time training process or delivery system has been put into place.	***Just-in-time training is used, but the process and delivery system has not been refined so it can be used realistically within the organization.***	A process and delivery for just-in-time training is in place, but has not been adopted by the organization as a mechanism for solving issues.	A process and delivery system has been established for just-in-time training organization-wide and is used consistently.	Moderate
Expectations for All Staff	Expectations of staff are not clearly defined and are not part of the organizational culture.	Expectations of staff are articulated but are limited in scope.	Expectations of staff are articulated and are broad in scope, but have not been adopted as part of the organizational culture.	***Expectations for all staff are clearly articulated. Performance expectations are built into work functions and are part of the organizational culture.***	Neutral
Troubleshooting as Part of Professional Development	No form of troubleshooting is integrated into the professional development program.	Troubleshooting is built into the professional development program but is limited in scope and provided inconsistently. Roles and responsibilities are not clearly defined.	***Troubleshooting is built into the professional development program and is used as a major strategy for technical support. Technical versus end-user roles and responsibilities are not clearly defined.***	Basic troubleshooting is built into the professional development program and is used as a first line of defense in conjunction with technical support.	Minimal to Moderate
Training for Technical Staff	Technical staff is only given training to take care of the immediate issues in the district. Advanced training is not encouraged.	***Technical staff receives consistent training around emergent issues. Advanced training is not district sponsored but is encouraged.***	Technical staff receives consistent training around emergent issues, and have limited district-sponsored opportunities for advanced training.	Technical staff receives ample training as a normal part of their employment, and includes training toward certification.	Minimal to Moderate

Domain Result Summary: According to the TSI your Professional Development (Domain 3) is considered "Moderately Efficient" requiring attention and improvement. The "Moderate Efficency" level of development refers to a system that has some areas of excellence, but typically isolated and limited in implementation. While there is some good support in place, improvement will be required to overcome technology challenges

Recommendation: Empowering the school employee to use technology effectively is a very effective strategy to address technical support issues. The staff member should not be expected to solve difficult technical problems. However, if simple problems can be solved or merely identified by the end-user, technical staff can concentrate on more complex tasks. It is recommended that an effective training program for ALL staff is put into place. This program should include appropriate incentives, accountability, and a diverse set of learning resources.
Cost: High

Recommendation: Just-in-time-training provides opportunities for staff to learn exactly what they need, when they need it, in small-defined pieces. When an effective system of just in time training is in place, staff are empowered and overall support requirements of the organization are reduced. It is recommended that a just in time training program is implemented and used as part of the organizational culture.
Cost: Moderate

Recommendation: Technology changes rapidly and the complexities of a highly technical environment are challenging. To stay abreast of current solutions it is recommended that technical staff training is provided as a normal part of working in the school district. Training activities should be part of the work schedule, and should lead toward certification.
Cost: Minimal to Moderate

4 Enterprise Management

	Low Efficiency	Moderate Efficiency	Satisfactory Efficiency	High Efficiency	Impact
Trouble Ticketing System	No trouble ticketing system exists.	A simple ticketing system is in place but is not electronic and/or is simple in its implementation not allowing for universal tracking of issues and establishing trends.	A trouble ticketing system is in place and is used extensively for responding to technical issues. Analysis of issues, response time, and possible trends is not done.	***All technical issues are recorded and delegated to appropriate resources through an electronic ticketing system. All technical issues are tracked and evaluated through this system.***	Minimal to Moderate
Virus Protection	No virus software is used.	Virus software is used, but it is client-based and therefore often out of date.	Server-based virus software is used, but the parameters for its use are loosely defined and updates are not consistent.	***Server-based virus software is available, used, and automatically updated.***	Minimal to Moderate
Network Infrastructure and Bandwidth	Network access is limited and is not available in every location.	Network access is available to all locations but does not impact all computers and is limited in bandwidth.	Network access is available to all locations, but segments of the network are limited in bandwidth.	***Robust broadband network access is available to all locations allowing for unlimited network control and tool use.***	High to Significant
Desktop and Software Standardization Tools (Profiles)	No desktop standardization tools or practice are used.	Desktop standardization tools are in place but are mostly ignored once the equipment is deployed.	Desktop standardization tools are in place, but user changes are not automatically accommodated.	***Desktop standardization tools are used to provide a common desktop for all users and access to common software. Changes to the desktop are automatically corrected.***	Minimal
Network Sniffing Tools	No network sniffing tools are used.	Network sniffing tools are used for problem diagnosis only.	Network sniffing tools are used for problem diagnosis and limited preventative maintenance.	***Network sniffing tools are used to both diagnose problems and establish performance matrices for preventative maintenance. These tools***	Minimal to Moderate

				systematically monitor the network.	
Online Knowledgebase	No online knowledgebase is present.	An online knowledgebase is in place, but it is limited in scope and is not readily used in the organization.	***An online knowledgebase is in place and is consulted by users. It is not designed to easily expand and users do not use it as a first line of defense.***	An online knowledgebase is in place and is expansive in its detail. It is used readily, and automatically grows based upon the trend data generated in other tracking systems.	Minimal to Moderate
Integrated and Systemic Electronic Communication	Electronic communication is limited and has little use for providing technical support.	Electronic communication is available to many staff but is not integrated into the daily work of employees.	Electronic communication is available to everyone in the organization but is not readily used for technical support.	***Electronic communication is available to everyone in the organization and is integrated into daily work, so it can be used for technical support.***	Minimal to Moderate
Remote Computer Management	No remote management is available	Remote management is available for servers only.	***Remote management is available for all computers but is not used extensively.***	Remote management is available for all computers and is used as a primary strategy of support.	Moderate to High
Imaging Software	Imaging systems are not used.	Imaging software is used in the most primitive sense, only providing recovery services for those with the software provided by the vendor.	An image is used for delivery of the machine but is not used to clone all of the software on the machine. Imaging is used as a troubleshooting strategy.	***Imaging software is used for delivery of new machines and as a troubleshooting strategy. Software installed through the imaging process is comprehensive.***	Minimal
Metering and Application Push Technology	Metering and Push technology is not used as a support strategy.	Metering and Push technology is used for metering but is not used for installation and updates, and its use is limited in scope.	Metering and Push technology is used for metering and some software updates, but major software installations are handled on the individual computer.	***Metering and Push technology is used for all software distribution, technical updates, and for metering of software on district computers.***	Moderate
Server Farms and Centralized Services	Every site has its own server and in some cases, multiple servers. Backup and server management occurs locally.	***Each site has only one server with some services (e.g., e-mail, Student information, etc.) provided centrally.***	Many servers are consolidated into a few locations and most services are provided centrally.	All servers and services are centralized requiring minimal server management outside of one location.	Moderate to High
Application Service Providers (ASPs)	No ASP services are used.	***One or two ASP services are used, but it does not impact support due to the peripheral nature of the product.***	A number of district or commercial ASP services are used but is limited to one category of software (e.g., productivity, research, libraries, content, etc.).	A district OR commercial ASP model is used for most major software applications after a thorough cost/benefit and risk analysis.	Moderate to High
Thin-client Computing	***Thin-client computing is not used.***	Thin-client is used but is limited to a small number of users for specific applications.	Thin-client is used for most users of administrative systems and some productivity software.	All administrative and productivity software for staff is delivered through a thin-client model. (Not instructional applications)	Moderate to High

			(Not instructional applications)		
Vendor-specific Management	***Vendor tools are not installed or considered when purchasing hardware.***	Vendor tools are available and have been purchased, but they are mostly unused.	Vendor tools are used in a limited way for diagnosis and prevention.	Vendor tools are used extensively for diagnosis of issues, to streamline processes, and for preventive measures.	Minimal
Quality Assurance (QA) and Customer Follow-up	***Surveys are done generally as part of other departmental survey work within the organization or not at all.***	Quality assurance surveys are conducted, but they are not automated and are only done annually.	Surveys are done specific to technical support; however, they are done only periodically and the data is used sporadically.	Quality assurance is measured by a random and automatic system that tracks customer satisfaction and closed tickets. Data is collected throughout the year. Questions asked are specific to technical support and the data is used to make adjustments.	Minimal
Student/Fiscal/HR/Assessment Systems	Student, Fiscal, HR and/or Assessment systems are not in place.	Student, Fiscal, HR and/or Assessment systems are partially in place, and are not reliable or intuitive.	Student, Fiscal, HR and/or Assessment systems are in place and reliable, but do not integrate well with other systems and are not intuitive.	***Student, Fiscal, HR and/or Assessment systems are in place, reliable, intuitive, and integrate nicely with other productivity tools.***	Moderate to High

Domain Result Summary: According to the TSI your Enterprise Management (Domain 4) is considered "Satisfactorily Efficient" requiring limited improvements. The "Satisfactory Efficiency" level of development refers to a system that is doing a very good job of support in many areas. Improvements in a number of areas will enhance the organizational capacity to effectively implement technology.

Recommendation: Server management can be time-consuming, complex, and resource intensive. Whenever possible, consolidation of server resources to minimize management is a great advantage. This reduces labor required for backup, redundant systems, and unnecessary overhead. To create server farms a robust network must be in place. It is strongly recommended that when appropriate network infrastructure is in place, centralization of servers is implemented.
Cost: Moderate to High

Recommendation: A thin-client is a computer that does not serve as a full-functioning stand alone PC. The Operating system and applications actually run on a remote server and are all centrally controlled and managed. As a result, the hardware requirements for the end-user are typically substantially less. In addition a thin-client strategy allows a small staff to ensure that users experience a consistent environment and that critical updates and software upgrades can be easily and quickly deployed. While the hardware requirements are very low for the client, they are very high for the server. Costs for hardware and software are marginally lower or neutral but support costs can be dramatically decreased. It is recommended that a thin-client computing environment should be considered for administrative applications that have little or no multi-media requirements and where end-user hardware requirements may be challenging.
Cost: Moderate to High
Resources: www.citrix.com, www.microsoft.com (Terminal Services)

Recommendation: An application service provider serves a large population of users with one very large central processing resource. The ASP takes advantage of the economies of scale to provide application services at a reduced cost. With this scenario, many of the technical support issues are shifted to the ASP including backup and server performance. When appropriate infrastructure is in place, it is recommended that core applications are hosted by an Application Service Provider.
Cost: Moderate to High

Recommendation: Many vendors provide their own management tools to reduce downtime and increase support. This includes restore disks and management tools like HP's Insight Manager. It is highly recommended that districts take advantage of vendor provided tools for the

management of computer systems.
Cost: Minimal

Recommendation: A technology support team should be concerned about the quality of service they are providing their end-users. Good quality assurance tracks downtime, quality of service, and responds to customer feedback. The most effective quality assurance is conducted randomly throughout the year and drives changes in support strategies. It is highly recommended that the district put into place a quality assurance and customer feedback system.
Cost: Minimal

Print your results using the print button at the top of the page. Your district profile cannot be retrieved after leaving this session. Be sure to print your profile before closing this window. Learn more about the TSI program or rubric.

Appendix E: CTECS Staff Technology Survey

CTECS Technology Survey

Dear Colleagues:

Research supports that regular and frequent professional development opportunities is a contributing factor in increasing student achievement. Part of the process for assessing needs and looking at progress in the implementation of our new district-wide technology plan will be the administration of a technology professional development needs assessment survey, which measures key elements of an effective technology professional development series. These key areas are aligned with Connecticut State Technology Standards and include:

- CREATING THE ENVIRONMENT FOR LEARNING
- CREATING LEARNING ENVIRONMENTS AND EXPERIENCES
- PRODUCTIVITY AND PROFESSIONAL PRACTICE
- SOCIAL, LEGAL, ETHICAL AND HUMAN ISSUES

The Connecticut Technical Education and Career System's (CTECS) Technology Survey will provide baseline data in developing the goals of our district's new technology plan related to staff development offerings for professional technology use and TLE instruction use. This short survey includes 16 multiple-choice items and your name will not appear on the survey and no one will see your answers to individual questions. The information gathered from this needs assessment will provide the district with information for areas of focus for the district to deliver professional development that supports the enhancement of teaching and learning.

Category I - CREATING THE ENVIRONMENT FOR LEARNING

Question 1
Demonstrate an understanding of research and potential applications of educational technology in learning.

Initial: Staff is aware of software related to specific content areas and available technology tools.

Developing: Staff uses available technology in creating lessons, student assignments and other instructional materials.

Proficient: Staff can instruct the class on how to use specific content-related software, shares successful curriculum projects with colleagues, and acts as a resource to other teachers.

Please select an answer to the following statement based on a level you believe most fits your current level.

I am able to demonstrate an understanding of research and potential applications of educational technology in learning.

- Initial
- Developing
- Proficient

Question 2
Apply problem solving strategies to issues involving teaching and learning with technology.

Initial: Staff understands the support system within the building to address technology problems and issues.

Developing: Staff is able to explain technology problems to troubleshooters, attempt basic solutions, and help students to minimize user errors.

Proficient: Staff can instruct other colleagues on solving technology problems, has back up plans when things go wrong, and can apply advanced troubleshooting strategies to address a technology issue.

Please select an answer to the following statement based on a level you believe most fits your current level.

I am able to apply problem solving strategies to issues involving teaching and learning with technology.

- Initial
- Developing
- Proficient

Question 3
Demonstrate an understanding of network capabilities and electronic communications.

Initial: Staff uses network drives for document storage; teacher navigates to remote network locations to share and retrieve documents.

Developing: Staff instructs students to save documents in a common network location; teacher can access student work from a common network location and electronically communicate feedback to students.

Proficient: Staff develops and maintains a web site to post student or parent resources and for parents and students to retrieve information.

Please select an answer to the following statement based on a level you believe most fits your current level.

I am able to demonstrate an understanding of network capabilities and electronic communications.

- Initial
- Developing
- Proficient

Question 4
Demonstrate an understanding of emerging technologies

Initial: Staff accepts new technologies as they arrive in the TLE; implements solutions introduced through emerging technologies.

Developing: Staff integrates emerging technologies into the TLE to enhance the learning experience for students.

Proficient: Staff researches emerging technologies and serves as an informational resource for others.

Please select an answer to the following statement based on a level you believe most fits your current level.

I am able to demonstrate an understanding of emerging technologies.

- Initial
- Developing
- Proficient

Category II - CREATING LEARNING ENVIRONMENTS AND EXPERIENCES

Question 5
Teachers and Staff will create learning experiences that align with district and state content standards.

Initial: Staff is aware of different technologies that can be used to meet district and state content standards.

Developing: Teacher integrates various technologies that support district and state content standards into TLE instruction.

Proficient: Teacher works with others to align the technology standards with district and state guidelines.

Please select an answer to the following statement based on a level you believe most fits your current level.

I am able to create learning experiences that align with district and state content standards.

- Initial
- Developing
- Proficient

Question 6
Teachers will create new learning environments and develop new roles of teacher and learner.

Initial: Staff is aware of how technology can be used in a variety of instructional settings and with a variety of methods.

Developing: Teacher creates different lessons that demonstrate an understanding of technology and its use in instruction.

Proficient: Teacher creates and implements an active, exploratory, and inquiry-based learning environment, rich with educational technology.

Please select an answer to the following statement based on a level you believe most fits your current level.

I am able to create new learning environments and develop new roles of teacher and learner.

- Initial
- Developing
- Proficient

Question 7
Teachers will use technology resources to better assess and understand students' needs and abilities in order to improve instructional practice and maximize student learning.

Initial: Teachers and Staff are aware of different methods of collecting and analyzing student data.

Developing: Teacher incorporates technology-based projects into the curriculum and uses a variety of technological methods to assess student work and collect and gather data.

Proficient: Teacher and Staff uses data collected in a variety of ways to assess student work and improve instruction.

Please select an answer to the following statement based on a level you believe most fits your current level.

I am able to use technology resources to better assess and understand student's needs and abilities in order to improve instructional practice and maximize student learning.

- Initial
- Developing
- Proficient

Question 8
Teachers will use technologies to provide individualized instruction to support students' needs.

Initial: Teachers and Staff are aware of different technologies available to assist in specialized instruction.

Developing: Teacher develops, designs and implements instructional activities for a diverse student population that integrates technologies appropriate to students' needs.

Proficient: Teachers and Staff design a learning environment that incorporates technology and considers all students' needs

Please select an answer to the following statement based on a level you believe most fits your current level.

I am able to use technologies to provide individualized instruction to support student's needs.

- Initial
- Developing
- Proficient

Question 9
PRODUCTIVITY AND PROFESSIONAL PRACTICE
A. Teachers and staff will use educational technology to communicate/collaborate with students, parents, and teachers.

Initial: Teachers and Staff communicate with students, parents, and colleagues through voicemail, memos, and letters; communicates sporadically through email.

Developing: Teachers and Staff communicate regularly with students, parents, and teachers through email; maintains a web site for communication with parents, students, and colleagues.

Proficient: Teachers and Staff assume a leadership role by training colleagues on the uses of educational technology as a communication tool; utilizes distance learning opportunities to enhance the educational experience for students.

Productivity and Professional Practice
Please select an answer to the following statement based on a level you believe most fits your current level.

I am able to use educational technology to communicate/ collaborate with students, parents, and teachers

- Initial
- Developing
- Proficient

Question 10
Teachers will use online resources to communicate/collaborate with the school community and the global community.

Initial: Staff navigates to sites on the Internet that enrich the educational experience.

Developing: Staff communicates with colleagues through professional web sites; utilizes the Internet as a tool to enhance craft.

Proficient: Staff utilizes resources available through the Internet to create authentic learning experiences for students through collaboration with experts; collaborates with colleagues to foster the use of online resources in the TLE.

Please select an answer to the following statement based on a level you believe most fits your current level.

I am able to use online resources to communicate / collaborate with the school community and the global community.

- Initial
- Developing
- Proficient

Question 11

Staff will use technology to collect and manage data related to teaching and learning.

Initial: Staff inputs information (attendance, grades, etc) into student management system (SASI); organizes lesson plans electronically.

Developing: Staff uses electronic grading program to collect, organize, and analyze student performance data; develops electronic portfolio of “best practices” for periodic use.

Proficient: Staff trains colleagues on the use of electronic grade books to collect, organize and analyze data; implements electronic portfolios for student assessment and reflection.

Please select an answer to the following statement based on a level you believe most fits your current level.

I am able to use technology to collect and manage data related to teaching and learning.

- Initial
- Developing
- Proficient

Question 12
Teachers will reflect on current practices, articulate goals, and develop strategies to improve understanding of educational technology and further the integration of technology in the TLE.

Initial: All staff completes a self-assessment and identifies areas of strength and weakness; develops goals, with help, to increase proficiency with educational technology.

Developing: Staff generates goals and strategies to enhance understanding of technology integration in the TLE; utilizes new learning to enrich the educational experience through technology.

Proficient: Staff serves as a mentor to others as they develop their understanding of the role of technology in the TLE; models technological integration for others.

Please select an answer to the following statement based on a level you believe most fits your current level.

I am able to reflect on current practices, articulate goals, and develop strategies to improve understanding of educational technology and further the integration of technology into the TLE.

- Initial
- Developing
- Proficient

SOCIAL, LEGAL, ETHICAL AND HUMAN ISSUES

Question 13
Staff will understand, model, and teach the legal and ethical practices regarding information and educational technology.

Initial: Staff is aware of copyright laws, rights, and responsibilities and license agreements as well as district policies related to technology use.

Developing: Staff practices netiquette and ethical and legal behaviors regarding technology use.

Proficient: Staff leads professional development efforts to help other staff understand and apply ethical and legal information to the use of technology.

Please select an answer to the following statement based on a level you believe most fits your current level.

I am able to understand, model, and teach the legal and ethical practices regarding information and educational technology.

- Initial
- Developing
- Proficient

Question 14
Staff will model and teach safe, healthy practices of technology use.

Initial: Staff understands basic information regarding ergonomics, equipment disposal and online safety.

Developing: Staff applies ergonomics to the technology work environment, disposes of equipment properly, and monitors students' use of online sites.

Proficient: Staff advocates for the healthy and safe use of technology by mentoring other staff and assisting in the development of district policies.

Please select an answer to the following statement based on a level you believe most fits your current level.

I am able to model and teach safe, healthy practices of technology use.

- Initial
- Developing
- Proficient

Appendix F: Speak Up Student Survey

2019 Speak Up Survey

Speak Up 2019

Grades 9 - 12

District: Connecticut Technical Education and Career System

Results based on 1167 survey(s).
Note: Survey responses are based upon the number of individuals that responded to the specific question.

1 **What grade are you in?**

Response	# of Responses	% of Responses	State %	National %
Grade 9	268	23%	24%	29%
Grade 10	328	28%	28%	25%
Grade 11	294	25%	24%	23%
Grade 12	268	23%	24%	23%
Alternative program or other	4	0%	0%	1%

2 **Gender**

Response	# of Responses	% of Responses	State %	National %
Girl	487	42%	47%	51%
Boy	672	58%	53%	49%

3 **How would you rate your technology skills compared to other students in your class?**

Response	# of Responses	% of Responses	State %	National %
Advanced - I know more than others	367	32%	31%	28%
Average - I know about the same as others	756	65%	66%	67%
Beginner - I am still learning how to use technology	35	3%	3%	4%

4 **What class format best represents the majority of your classes this year?**

Response	# of Responses	% of Responses	State %	National %
Traditional classroom - teacher and students together in a physical classroom	712	62%	65%	66%
Blended learning class where part of the time I am in an online learning environment and other times I am in a traditional face-to-face class away from home (like a school)	321	28%	25%	23%
Flipped class where students watch/listen to lectures or lessons at home and then use class time to do projects and get homework help	50	4%	5%	6%
Virtual class where my learning is done fully online	27	2%	2%	3%
Other	42	4%	3%	2%

5 **Which of these things do you do regularly using technology for schoolwork? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Use a school portal for information like grades or to upload homework	816	71%	67%	71%
Post to class blogs or class discussion board	264	23%	22%	25%
Use online textbooks	635	55%	56%	42%
Take tests or quizzes online	659	58%	47%	58%
Use educational mobile apps (like graphing calculator, language translator, vocabulary lists)	494	43%	45%	49%
Use Internet-based services (like Google drive, Dropbox, Turnitin.com)	775	68%	63%	68%
Create presentations	713	62%	64%	70%
Take photos of school assignments or textbook pages	579	51%	54%	47%
Text message other students for class or homework help	620	54%	59%	52%
Text message my teacher with class or homework related questions	134	12%	13%	17%
Use email to communicate with my teachers	665	58%	59%	55%
Use my social networking sites to collaborate with classmates on a project (like Facebook, Twitter)	287	25%	27%	26%

Find online video lessons to help with homework/studying (like YouTube, Kahn Academy)	472	41%	40%	41%
Watch an online video created by my teacher	238	21%	23%	28%
Listen to an audio recording or audio book	204	18%	17%	19%
Use digital study games (like Quizlet, Coolmath.com)	439	38%	37%	43%
Post content I create online (like writings, videos, artwork)	177	15%	15%	18%

6 **What obstacles do you face using technology at your school? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Cannot use the school Internet with my mobile device	292	26%	23%	35%
Not allowed to go on social media (like Twitter or Facebook)	477	43%	37%	58%
Not allowed to text message with classmates	503	45%	40%	43%
Not allowed to use any of my mobile devices on campus	305	27%	22%	24%
Not enough computers or they don't often work	300	27%	25%	28%
I cannot get online when I am at school	179	16%	14%	15%
Websites that I need for schoolwork are blocked (through school filters or firewalls)	422	38%	31%	51%
Internet speed is too slow	499	45%	47%	51%
Teachers don't know how to use the technology	272	24%	25%	22%
Teachers limit our technology use	555	50%	47%	40%
Too many rules against using technology	567	51%	48%	47%
Too much fear about the dangers of the Internet	246	22%	20%	24%
Concerns about how my school is protecting my personal data	191	17%	17%	19%
Technology is not needed to complete my assignments	111	10%	9%	9%
I rarely use technology at my school	95	8%	8%	9%
No obstacles	141	13%	14%	9%

7 **How often do school filters or firewalls block you from using websites that you want to use for school assignments or projects?**

Response	# of Responses	% of Responses	State %	National %
Never	88	8%	13%	7%
Rarely	250	23%	27%	16%
Sometimes	381	35%	32%	31%
Often	236	22%	18%	28%
All of the time	131	12%	10%	18%

8 **Which of these mobile devices do you have for your own use (but not provided to you by your school)? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
A phone with no Internet	169	16%	13%	14%
A Smartphone with Internet (like iPhone, Samsung Galaxy)	894	83%	85%	82%
Laptop	507	47%	48%	51%
2-in-1 laptop (a laptop that can turn into a tablet)	84	8%	8%	8%
Web-based laptop (like a Chromebook)	65	6%	5%	7%
Tablet (like an iPad)	346	32%	33%	38%
Digital reader (like Kindle, Nook)	132	12%	14%	17%

9 **What kind of Internet access do you have at home? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
A slow Internet connection (like dialup through a landline)	93	8%	8%	7%
A fast Internet connection (like DSL, Broadband, or cable)	507	46%	48%	45%
A WiFi connection	877	79%	80%	78%
A mobile data plan (like 3G/4G/LTE)	533	48%	51%	52%
No home access. I use free Internet (like the public library, after school program, or WiFi hotspot)	78	7%	6%	6%

10 **Imagine that you were going to design the ideal mobile app for your class or school. What types of features or functionality should your mobile app have? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Interactive school calendar	833	75%	72%	71%
Class schedule organizer	839	76%	73%	74%

Sports schedules and scores	714	64%	62%	66%
School information (like contact information, student handbook)	799	72%	68%	69%
School newsfeed	672	61%	57%	59%
Emergency alerts (like school closures)	902	81%	78%	74%
Notifications (like upcoming tests or due dates)	919	83%	80%	81%
Student portal to access grades and assignments	904	82%	75%	76%
Interactive forms for parents (report absences, permission slips)	523	47%	43%	44%
Parent portal (PTA information)	494	45%	38%	34%
School payment system	568	51%	47%	42%
Lunch menus	871	79%	73%	66%
Ability to connect with teachers	742	67%	63%	67%
Class group messages	736	66%	64%	64%
Tip line to report concerns (like bullying, cheating)	558	50%	46%	47%
Mental health/crisis hotline	491	44%	41%	40%
Links to school social media accounts	470	42%	40%	43%
Study games or apps	712	64%	60%	64%
Photo gallery	667	60%	54%	48%
Book list	516	47%	41%	41%
Other	69	6%	6%	6%

11 **How important do you think it is for every student to be able to use a mobile device like a laptop, tablet, or Chromebook during the school day to support schoolwork?**

Response	# of Responses	% of Responses	State %	National %
Very unimportant	79	7%	8%	6%
Unimportant	33	3%	3%	3%
Neither important nor unimportant	190	18%	17%	17%
Important	393	37%	37%	39%
Very important	379	35%	34%	35%

12 **Which of these are true for you most of the time when you are at school? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %

I use my own cell phone or smartphone in class to help with schoolwork	738	69%	71%	58%
I use a laptop in class that is provided by my school	100	9%	12%	32%
I use a tablet in class that is provided by my school	125	12%	11%	14%
I use a Chromebook in class that is provided by my school	81	8%	7%	16%
I use computers in the computer lab, library, or media center to help with schoolwork	611	57%	55%	44%
I do not regularly use technology when I am at school	195	18%	17%	13%

13 **What would be the BEST device to use for each of these schoolwork tasks?**

Write a report

Response	# of Responses	% of Responses	State %	National %
Smartphone	62	6%	6%	4%
Laptop	943	91%	91%	91%
Tablet	30	3%	3%	4%
Digital Reader	6	1%	1%	1%

Take notes

Response	# of Responses	% of Responses	State %	National %
Smartphone	302	29%	27%	17%
Laptop	439	42%	45%	52%
Tablet	277	27%	26%	29%
Digital Reader	25	2%	2%	2%

Take an online test

Response	# of Responses	% of Responses	State %	National %
Smartphone	143	14%	13%	6%
Laptop	709	69%	70%	79%
Tablet	177	17%	16%	14%
Digital Reader	3	0%	0%	1%

Create a PowerPoint

Response	# of Responses	% of Responses	State %	National %

Smartphone	48	5%	5%	3%
Laptop	956	92%	92%	89%
Tablet	32	3%	3%	7%
Digital Reader	5	0%	0%	1%

Create a video

Response	# of Responses	% of Responses	State %	National %
Smartphone	417	40%	38%	35%
Laptop	507	49%	51%	44%
Tablet	105	10%	10%	19%
Digital Reader	4	0%	1%	1%

Access an online textbook

Response	# of Responses	% of Responses	State %	National %
Smartphone	199	19%	19%	12%
Laptop	496	47%	51%	50%
Tablet	240	23%	21%	26%
Digital Reader	111	11%	9%	12%

Research online

Response	# of Responses	% of Responses	State %	National %
Smartphone	310	30%	29%	21%
Laptop	568	54%	55%	62%
Tablet	148	14%	14%	15%
Digital Reader	18	2%	1%	1%

Read online articles

Response	# of Responses	% of Responses	State %	National %
Smartphone	279	27%	28%	22%
Laptop	373	36%	39%	41%
Tablet	248	24%	22%	24%
Digital Reader	133	13%	11%	12%

Check grades

Response	# of Responses	% of Responses	State %	National %
Smartphone	644	61%	64%	52%

Laptop	276	26%	26%	35%
Tablet	121	12%	10%	13%
Digital Reader	6	1%	1%	1%

Watch a video (YouTube)

Response	# of Responses	% of Responses	State %	National %
Smartphone	503	48%	49%	40%
Laptop	341	32%	33%	37%
Tablet	202	19%	18%	23%
Digital Reader	5	0%	0%	0%

Take an online class

Response	# of Responses	% of Responses	State %	National %
Smartphone	66	6%	7%	4%
Laptop	886	86%	85%	89%
Tablet	71	7%	7%	7%
Digital Reader	10	1%	1%	1%

Connect with classmates

Response	# of Responses	% of Responses	State %	National %
Smartphone	810	77%	78%	74%
Laptop	178	17%	17%	18%
Tablet	55	5%	5%	7%
Digital Reader	6	1%	1%	0%

Connect with teachers

Response	# of Responses	% of Responses	State %	National %
Smartphone	551	53%	55%	51%
Laptop	395	38%	37%	38%
Tablet	77	7%	7%	10%
Digital Reader	10	1%	1%	1%

Work on a school project with a group

Response	# of Responses	% of Responses	State %	National %
Smartphone	180	17%	18%	15%
Laptop	740	71%	72%	70%

Tablet	110	11%	9%	14%
Digital Reader	6	1%	1%	1%

Access social media

Response	# of Responses	% of Responses	State %	National %
Smartphone	779	75%	75%	72%
Laptop	189	18%	18%	19%
Tablet	72	7%	6%	8%
Digital Reader	4	0%	0%	1%

14 **If you could take a fully online or virtual class in any school subject, what subjects would you like to take online? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Career Technical Education classes	272	25%	24%	20%
Computer Science/Programming	299	27%	27%	27%
Digital media production	243	22%	22%	22%
English/Language Arts	292	27%	26%	25%
Health	247	23%	21%	26%
Journalism or Yearbook	170	16%	14%	15%
Math	320	29%	28%	25%
Physical Education	166	15%	15%	15%
Science	285	26%	26%	23%
Social Studies/History	296	27%	26%	24%
Visual or performing arts	179	16%	16%	13%
World or foreign languages	291	27%	25%	24%
All of my classes	184	17%	16%	13%
None of my classes	212	19%	20%	19%
I have already taken an online class in one or more of these subjects	40	4%	3%	11%

15 **How important do you think it is for every student to take a fully online or virtual class before graduating from high school?**

Response	# of Responses	% of Responses	State %	National %
Very unimportant	158	15%	15%	12%
Unimportant	155	14%	15%	16%

Neither important nor unimportant	479	45%	44%	41%
Important	205	19%	19%	21%
Very important	77	7%	7%	9%

16 **In some schools, there is a new type of classroom format called blended learning. With blended learning, students spend part of the week in a traditional teacher led class at a school and the rest of the week in an online learning environment where the student controls the time, place, path, and/or pace of their learning. Do you think that this would be a good way for you to learn?**

Response	# of Responses	% of Responses	State %	National %
Yes	643	61%	60%	61%
No	408	39%	40%	39%

17 **Many people around the world are interested in having more students pursue careers in science, technology, math, or engineering. Are you interested in a job or career in any of these fields?**

Response	# of Responses	% of Responses	State %	National %
Not at all interested	159	15%	16%	16%
Somewhat uninterested	106	10%	11%	10%
Neither interested nor uninterested	163	16%	16%	15%
Somewhat interested	316	31%	30%	31%
Very interested	291	28%	28%	28%

18 **How would you like to explore future careers or get prepared for a future job? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Take career preparation classes at school or a local college or trade school	679	65%	64%	62%
Take field trips to visit companies and meet successful role models	701	67%	67%	67%
Learn about careers through social media like Twitter and Facebook	269	26%	27%	29%
Learn from teachers who have worked in the professional field	614	59%	57%	55%
Let career professionals teach lessons at school	596	57%	56%	57%
Play an online, video, or digital game about a career	361	35%	34%	33%
Use a quiz to identify my career interests or strengths	476	46%	46%	47%
Watch "Day in the Life" videos about different jobs	393	38%	38%	40%

Use mobile apps or websites to explore careers	419	40%	40%	43%
Participate in science and math competitions	172	17%	17%	18%
Work with mentors who can help me with my college and career planning	571	55%	53%	55%
Get real life experience (like working a part-time job, internship, or volunteering)	768	74%	71%	71%
Go to summer camp (like space camp)	230	22%	21%	29%
Use technology tools to make things (like 3D printers and maker software)	385	37%	35%	31%

19 **If your school offered a class or after school activity to learn how to do computer programming or coding, how interested would you be in that?**

Response	# of Responses	% of Responses	State %	National %
Not at all interested	258	25%	26%	24%
Somewhat uninterested	99	10%	10%	12%
Neither interested nor uninterested	140	14%	14%	15%
Somewhat interested	276	27%	26%	27%
Very interested	193	19%	18%	17%
Already doing that	61	6%	6%	5%

20 **How often do you access these social media tools or online activities in your free time (not for schoolwork)?**

Facebook

Response	# of Responses	% of Responses	State %	National %
Never	238	23%	24%	28%
Rarely	200	19%	19%	19%
Sometimes	204	20%	20%	19%
Often	192	19%	19%	17%
All of the time	192	19%	18%	16%

Instagram

Response	# of Responses	% of Responses	State %	National %
Never	242	23%	23%	25%
Rarely	68	7%	6%	7%
Sometimes	103	10%	10%	11%
Often	229	22%	23%	22%

All of the time	389	38%	39%	35%

Pinterest

Response	# of Responses	% of Responses	State %	National %
Never	719	72%	70%	61%
Rarely	108	11%	11%	11%
Sometimes	72	7%	8%	11%
Often	46	5%	5%	8%
All of the time	53	5%	6%	9%

Snapchat

Response	# of Responses	% of Responses	State %	National %
Never	307	30%	29%	26%
Rarely	97	9%	9%	8%
Sometimes	132	13%	12%	12%
Often	194	19%	20%	20%
All of the time	297	29%	30%	33%

Tumblr

Response	# of Responses	% of Responses	State %	National %
Never	652	65%	64%	65%
Rarely	111	11%	11%	10%
Sometimes	85	8%	8%	8%
Often	72	7%	7%	6%
All of the time	80	8%	9%	11%

Twitter

Response	# of Responses	% of Responses	State %	National %
Never	460	46%	42%	44%
Rarely	114	11%	11%	11%
Sometimes	136	13%	13%	11%
Often	115	11%	12%	13%
All of the time	182	18%	21%	22%

Vine

Response	# of Responses	% of Responses	State %	National %

Never	451	45%	43%	40%
Rarely	121	12%	12%	15%
Sometimes	188	19%	19%	17%
Often	133	13%	13%	14%
All of the time	110	11%	12%	14%

YouTube

Response	# of Responses	% of Responses	State %	National %
Never	27	3%	3%	4%
Rarely	62	6%	6%	7%
Sometimes	153	15%	16%	20%
Often	285	28%	27%	29%
All of the time	501	49%	49%	40%

Social messaging apps (like Facebook messenger, WhatsApp, KIK)

Response	# of Responses	% of Responses	State %	National %
Never	186	18%	20%	25%
Rarely	136	13%	14%	13%
Sometimes	155	15%	15%	16%
Often	178	18%	17%	17%
All of the time	359	35%	34%	28%

Video messaging (like Skype, FaceTime)

Response	# of Responses	% of Responses	State %	National %
Never	260	26%	26%	29%
Rarely	199	20%	20%	23%
Sometimes	201	20%	19%	21%
Often	170	17%	16%	14%
All of the time	185	18%	18%	13%

Blogging sites (your own or others)

Response	# of Responses	% of Responses	State %	National %
Never	724	72%	71%	69%
Rarely	122	12%	12%	13%
Sometimes	75	7%	8%	8%

Often	36	4%	4%	5%
All of the time	42	4%	5%	5%

Stream TV/movies (like Hulu, Netflix)

Response	# of Responses	% of Responses	State %	National %
Never	208	21%	20%	21%
Rarely	110	11%	10%	10%
Sometimes	169	17%	17%	17%
Often	220	22%	22%	22%
All of the time	303	30%	31%	31%

Online games/apps (like Quiz Up, Candy Crush)

Response	# of Responses	% of Responses	State %	National %
Never	280	28%	27%	26%
Rarely	206	21%	20%	18%
Sometimes	217	22%	21%	22%
Often	136	14%	14%	17%
All of the time	164	16%	18%	16%

Massively multiplayer online games (MMOG, MMORPG)

Response	# of Responses	% of Responses	State %	National %
Never	469	47%	47%	53%
Rarely	126	13%	12%	12%
Sometimes	113	11%	11%	11%
Often	115	11%	11%	9%
All of the time	183	18%	18%	13%

Special interest forums (like for games)

Response	# of Responses	% of Responses	State %	National %
Never	483	48%	49%	55%
Rarely	161	16%	16%	15%
Sometimes	150	15%	15%	13%
Often	95	9%	9%	8%
All of the time	110	11%	11%	9%

21 **What would be the benefits of having video, online, or digital games as a part of your regular schoolwork or classroom activities? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Games would make it easier to understand difficult topics	614	61%	60%	60%
I would develop critical thinking and problem solving skills	506	50%	49%	50%
I would be more interested in the subject	627	62%	60%	62%
I would feel more challenged in my schoolwork	298	30%	29%	27%
I would get immediate feedback on how much I learned	482	48%	46%	49%
It would be a more interesting way to practice problems	586	58%	57%	58%
I would go beyond the basic assignment and try new things through the game	405	40%	39%	39%
I would learn how to work in teams	346	34%	33%	33%
I would learn more about the subject	470	47%	45%	44%
I would be in charge of my learning	408	40%	40%	38%
Schoolwork could be personalized to my learning style	450	45%	43%	42%
Games could adapt to what I know and make it harder or easier for me	476	47%	45%	44%
Games would help show how I would use the topic in the real world	412	41%	40%	37%
I would learn skills that I can use in college or the workplace	337	33%	32%	32%
School would be more fun	567	56%	55%	53%
I don't think I would like playing games in school	174	17%	18%	15%

22 **Read these sentences. Check the box if you agree with them. As a result of using technology to support my learning...**

Response	# of Responses	% of Responses	State %	National %
I collaborate more with my classmates	558	57%	56%	54%
I communicate more with my teacher	430	44%	43%	45%
I participate more in class discussions	446	45%	45%	39%

I am developing critical thinking and problem solving skills	486	49%	48%	47%
I am developing creativity skills	546	56%	53%	51%
I gain a better understanding of the class materials	522	53%	52%	51%
I spend more time mastering a skill or learning something	459	47%	45%	43%
I am able to learn at my own pace	623	63%	61%	59%
I have more control over my learning	546	56%	53%	54%
I am learning in a way that better fits my learning style	474	48%	46%	45%
I am more interested in what I am learning in class	441	45%	43%	40%
My test scores and grades are better	432	44%	43%	42%
I am more likely to complete homework assignments	452	46%	44%	46%
My learning does not stop at the end of the class period or school day	336	34%	33%	34%

23 **How often do you engage in the following activities because you want to learn a skill or know more about something educational that interests you (but not just because it was an assignment or homework)?**

Research a website to learn more about a topic

Response	# of Responses	% of Responses	State %	National %
Never	132	14%	13%	10%
Rarely	183	19%	19%	17%
Sometimes	354	37%	38%	37%
Often	212	22%	21%	25%
All of the time	87	9%	9%	11%

Read an online news story or report

Response	# of Responses	% of Responses	State %	National %
Never	178	19%	18%	15%
Rarely	262	27%	26%	24%
Sometimes	327	34%	35%	34%
Often	129	13%	13%	19%
All of the time	59	6%	6%	8%

Watch a video to learn how to do something

Response	# of Responses	% of Responses	State %	National %
Never	85	9%	9%	7%
Rarely	127	14%	14%	13%
Sometimes	302	32%	33%	34%
Often	265	28%	28%	29%
All of the time	157	17%	16%	16%

Watch a TedTalk or similar short videos about people's ideas

Response	# of Responses	% of Responses	State %	National %
Never	476	50%	49%	40%
Rarely	226	24%	23%	24%
Sometimes	161	17%	18%	22%
Often	64	7%	7%	9%
All of the time	27	3%	3%	5%

Post a question on a discussion board or forum

Response	# of Responses	% of Responses	State %	National %
Never	530	56%	55%	55%
Rarely	197	21%	21%	21%
Sometimes	132	14%	15%	16%
Often	54	6%	6%	5%
All of the time	32	3%	3%	3%

Use social media to identify people who share my interests

Response	# of Responses	% of Responses	State %	National %
Never	339	36%	35%	35%
Rarely	186	20%	19%	19%
Sometimes	230	24%	26%	24%
Often	113	12%	12%	14%
All of the time	75	8%	8%	9%

Use social media to learn what others are doing or thinking about a topic that interests me

Response	# of Responses	% of Responses	State %	National %
Never	320	34%	33%	31%

Rarely	175	18%	18%	18%
Sometimes	247	26%	28%	26%
Often	122	13%	13%	15%
All of the time	83	9%	8%	10%

Find experts online to answer my questions

Response	# of Responses	% of Responses	State %	National %
Never	389	41%	41%	39%
Rarely	207	22%	21%	21%
Sometimes	208	22%	23%	23%
Often	85	9%	9%	11%
All of the time	59	6%	6%	6%

Take a self-paced tutorial or online class

Response	# of Responses	% of Responses	State %	National %
Never	509	54%	53%	51%
Rarely	177	19%	19%	19%
Sometimes	153	16%	17%	18%
Often	60	6%	7%	7%
All of the time	40	4%	4%	4%

Play an online game or virtual simulation activity

Response	# of Responses	% of Responses	State %	National %
Never	300	32%	32%	32%
Rarely	179	19%	18%	21%
Sometimes	243	26%	27%	25%
Often	121	13%	13%	13%
All of the time	101	11%	10%	9%

Use online writing tools to improve my writing

Response	# of Responses	% of Responses	State %	National %
Never	460	49%	48%	43%
Rarely	171	18%	18%	20%
Sometimes	186	20%	21%	21%
Often	82	9%	9%	9%

	All of the time	43	5%	4%	6%

24 **Imagine you are designing your dream school. Which of these tools would have the greatest positive impact on your learning? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Internet access anywhere at school	815	81%	80%	83%
Freedom to use my own mobile devices	713	71%	70%	72%
School provides every student with a mobile device	510	51%	50%	47%
Mobile device accessories (like attachable keyboards, covers)	558	56%	54%	52%
Things like databases, digital books, animations, and videos to help with schoolwork	624	62%	61%	62%
Digital games or virtual simulations	533	53%	52%	52%
Software that changes the level of difficulty and content to match your needs	600	60%	58%	59%
"Digital backpack" to help organize your work and access important information (like take notes, organize, and view assignments)	603	60%	59%	58%
Mobile apps for learning	636	63%	61%	60%
Interactive whiteboards (like Smartboard, Polyvision)	671	67%	65%	60%
Learning management systems (like Blackboard)	341	34%	33%	40%
A handheld device to answer questions in class (like clickers)	479	48%	47%	51%
3D printer	563	56%	55%	51%
Digital reader (like Kindle, Nook)	481	48%	46%	44%
Digital media creation tools (like video, audio)	461	46%	44%	46%
School mobile app	622	62%	60%	58%
Online or virtual classes	453	45%	43%	48%
Online tests and assessments	576	57%	56%	56%
Online textbooks	616	61%	60%	60%
Online tutors	490	49%	48%	52%
Social media tools to connect and work with others (like blogs, wikis, social networking sites)	472	47%	46%	48%
Text messaging	580	58%	57%	59%

Google hangouts or other online group messaging in class	474	47%	45%	47%
Other	88	9%	8%	6%

25 **How much do you agree with these statements?**

There is at least one adult at school that I can talk to about school or personal problems

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	160	16%	16%	13%
Disagree	88	9%	9%	12%
Neither agree nor disagree	211	22%	21%	22%
Agree	324	33%	33%	34%
Strongly agree	189	19%	20%	19%

I believe that my school cares about me as a person

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	131	13%	13%	11%
Disagree	141	14%	14%	14%
Neither agree nor disagree	317	32%	32%	33%
Agree	295	30%	30%	32%
Strongly agree	92	9%	10%	10%

Teachers are important to my learning

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	60	6%	7%	4%
Disagree	52	5%	5%	5%
Neither agree nor disagree	233	24%	24%	20%
Agree	436	46%	45%	46%
Strongly agree	173	18%	19%	25%

Doing well in school is important to me

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	33	3%	4%	2%
Disagree	17	2%	2%	2%
Neither agree nor disagree	126	13%	13%	11%
Agree	311	33%	33%	30%

Strongly agree	467	49%	48%	54%

I am interested in what I am learning at school

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	69	7%	7%	5%
Disagree	83	9%	9%	9%
Neither agree nor disagree	313	33%	33%	32%
Agree	336	35%	35%	39%
Strongly agree	154	16%	16%	14%

Using technology in my classes increases my engagement in learning

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	61	6%	6%	6%
Disagree	61	6%	7%	8%
Neither agree nor disagree	253	26%	28%	30%
Agree	354	37%	37%	37%
Strongly agree	228	24%	23%	19%

I like learning how to do things

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	34	4%	4%	3%
Disagree	29	3%	3%	3%
Neither agree nor disagree	160	17%	18%	19%
Agree	436	46%	45%	47%
Strongly agree	295	31%	30%	28%

I like learning about new ideas

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	40	4%	4%	3%
Disagree	36	4%	4%	3%
Neither agree nor disagree	194	20%	21%	20%
Agree	423	44%	44%	46%
Strongly agree	258	27%	26%	27%

I wish my classes were more interesting

Response	# of Responses	% of Responses	State %	National %

Strongly disagree	44	5%	5%	3%
Disagree	43	4%	5%	5%
Neither agree nor disagree	206	22%	23%	23%
Agree	260	27%	28%	33%
Strongly agree	402	42%	40%	37%

I would learn more if my classes used more technology to support my learning

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	80	8%	8%	7%
Disagree	82	9%	9%	12%
Neither agree nor disagree	326	34%	35%	38%
Agree	248	26%	26%	27%
Strongly agree	220	23%	22%	17%

I am learning important things for my future on my own outside of school

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	53	6%	6%	5%
Disagree	67	7%	7%	9%
Neither agree nor disagree	285	30%	30%	29%
Agree	322	34%	34%	36%
Strongly agree	224	24%	23%	21%

I like learning when I can be in control of when and how I learn

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	40	4%	4%	3%
Disagree	45	5%	5%	6%
Neither agree nor disagree	259	27%	28%	29%
Agree	345	36%	37%	38%
Strongly agree	261	27%	27%	24%

The subjects that I am learning at school are important for my future

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	67	7%	7%	7%
Disagree	71	7%	7%	11%
Neither agree nor disagree	279	29%	30%	30%

Agree	339	36%	36%	34%
Strongly agree	190	20%	19%	17%

The skills that I am learning at school are important for my future

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	56	6%	6%	6%
Disagree	55	6%	6%	9%
Neither agree nor disagree	207	22%	23%	28%
Agree	359	38%	38%	38%
Strongly agree	267	28%	27%	19%

I am often bored in my classes at school

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	40	4%	4%	5%
Disagree	65	7%	7%	9%
Neither agree nor disagree	293	31%	31%	29%
Agree	256	27%	28%	30%
Strongly agree	289	31%	29%	26%

I don’t like school

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	117	13%	12%	15%
Disagree	176	19%	19%	19%
Neither agree nor disagree	317	34%	35%	34%
Agree	137	15%	15%	16%
Strongly agree	187	20%	19%	16%

26 **Which of these have been problems for students at your school? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Approached by strangers online	179	21%	21%	20%
Sharing too much personal information online	328	38%	38%	39%
Seeing websites with inappropriate content	280	32%	32%	30%
Students using others' ideas as their own (like plagiarism)	360	41%	41%	47%
Being harassed online with hurtful texts or photos	322	37%	38%	36%

Sharing suggestive texts or photos	286	33%	34%	34%
Strangers asking to meet in person	154	18%	18%	17%
Spending too much time online	382	44%	43%	49%
Students using mobile devices to cheat	341	39%	39%	46%
Students' mobile devices have been stolen	449	52%	51%	51%
Students using their mobile devices in class when it is not allowed or appropriate	540	62%	60%	56%
Students' personal school data has been shared without their permission	204	23%	23%	21%

27 **Has your school explained to you how they are protecting personal information about you (like grades, test scores, discipline records) that is stored on school or district computers?**

Response	# of Responses	% of Responses	State %	National %
Yes	358	37%	38%	38%
No	597	62%	62%	62%

30 **Are you participating in any of these programs at your school this year? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Apprenticeship Programs	72	8%	8%	5%
AVID (Advancement Via Individual Determination)	28	3%	3%	7%
Computer programming club (coding)	53	6%	7%	6%
Future Teacher Academies	38	4%	4%	4%
Gear UP	36	4%	4%	4%
IB (International Baccalaureate)	30	3%	4%	4%
JROTC (Junior Reserve Officer Training Corps)	31	3%	4%	6%
MUN (Model United Nations) or Model Congress	28	3%	3%	3%
School Video Production Team	34	4%	4%	5%
STEM (Science, Technology, Engineering, and Mathematics) Academies	64	7%	7%	10%
Student Government	82	9%	9%	7%
Student Tech Support Team	51	6%	6%	4%
Talent Search	40	4%	4%	4%
Visual and Performing Arts Academies	43	5%	4%	12%
None of the above	662	73%	72%	61%

Appendix G: Speak UP Teacher

2014 Speak Up Survey

Speak Up 2019

Teacher Survey

District: Connecticut Technical Education and Career System

Results based on 300 survey(s).
Note: Survey responses are based upon the number of individuals that responded to the specific question.

1 **What is your primary job assignment this year?**

Response	# of Responses	% of Responses	State %	National %
Classroom teacher	225	75%	72%	77%
Special education teacher	13	4%	7%	11%
ELL/ESL Teacher	5	2%	1%	2%
Academic or guidance counselor	5	2%	1%	1%
Curriculum specialist	1	0%	1%	2%
Paraprofessional, instructional aide or paraeducator	0	0%	2%	1%
Other	49	16%	15%	7%

2 **What grade(s) do you currently teach?**

Response	# of Responses	% of Responses	State %	National %
Preschool	0	0%	0%	2%
Kindergarten - Grade 1 - Grade 2	0	0%	4%	20%
Grade 3 - Grade 4 - Grade 5	0	0%	7%	21%
Grade 6 - Grade 7 - Grade 8	0	0%	16%	22%
Grade 9 - Grade 10 - Grade 11 - Grade 12	288	98%	68%	28%

	Ungraded	6	2%	1%	1%
	All grades	0	0%	3%	7%

3 **What subject is your primary assignment?**

Response	# of Responses	% of Responses	State %	National %
General Elementary (all subjects)	0	0%	8%	32%
Business	0	0%	0%	1%
Career Technical Education	50	17%	10%	3%
Computer Science	2	1%	0%	0%
English	32	11%	9%	9%
English as a second language	4	1%	1%	1%
Health	3	1%	1%	0%
Math	42	14%	13%	10%
Physical education (P.E.)	8	3%	4%	3%
Reading/General Literacy	11	4%	5%	4%
Science	20	7%	9%	7%
Social Studies or History	26	9%	7%	6%
Special education	8	3%	6%	8%
Technology (includes computer lab, information technology, media arts, technology education)	39	13%	9%	2%
Title 1	0	0%	0%	0%
Visual and performing arts (includes Music, Art, Drama)	6	2%	5%	4%
Yearbook or Journalism	0	0%	0%	0%
World or foreign languages	1	0%	1%	2%
Other	43	15%	13%	6%

4 **How would you rate your technology skills?**

Response	# of Responses	% of Responses	State %	National %
Advanced - My skills are more advanced than most adults I know	132	45%	39%	32%
Average - My skills are similar to those of the adults I know	152	52%	58%	64%
Beginner - I'm just learning to use technology tools	7	2%	3%	4%

5 **Which of these mobile devices do you have for your own use? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
A phone with no Internet	42	14%	12%	11%
A Smartphone with Internet (e.g. iPhone, Samsung Galaxy)	247	85%	88%	88%
Laptop	220	75%	80%	85%
2-in-1 laptop (a laptop that can turn into a tablet)	19	6%	16%	8%
A web-based laptop (e.g. Chromebook)	19	6%	7%	8%
Tablet (e.g. iPad)	140	48%	53%	64%
Digital reader (e.g. Kindle, Nook)	91	31%	35%	34%

6 **Which of these best represents your classroom format this school year?**

Response	# of Responses	% of Responses	State %	National %
Traditional classroom - teacher and students together in a physical classroom	180	64%	71%	86%
Blended learning class where I am teaching a traditional face-to-face class part time each week and other times during the week students are in a self-directed online learning environment	92	33%	26%	12%
Flipped class where students watch/listen to lectures or lessons at home and then I use classtime to do projects and provide homework help	6	2%	2%	1%
Virtual class where my teaching is done fully online	1	0%	0%	1%

7 **Which of these activities do you do regularly using technology for professional tasks? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Use a school portal for class information like grades, homework assignments, teachers' notes or presentations, podcasts, turn in assignments	235	85%	80%	74%
Maintain a class blog or class discussion board	35	13%	12%	13%
Read articles and books using a digital reader or tablet	99	36%	38%	43%
Use mobile apps for professional tasks	98	35%	40%	44%
Use Internet-based services (e.g. Google drive, Dropbox, Turnitin.com)	195	70%	73%	76%

Create presentations	207	74%	73%	65%
Use text messaging as a way of communicating with colleagues	121	44%	50%	62%
Use text messaging as a way of communicating with the parents of my students	47	17%	17%	28%
Text message with students to answer any class or homework related questions	22	8%	8%	7%
Use email to communicate with my students	180	65%	62%	44%
Use Twitter as an informal professional development tool	25	9%	9%	9%
Update my social networking profile (e.g. Facebook, LinkedIn)	39	14%	19%	25%
Use an education oriented social networking site with my students (e.g. Edmodo)	51	18%	17%	17%
Learn how to do something from an online video	186	67%	67%	62%
Create videos of my lectures or lessons for students to watch	42	15%	15%	11%
Create audio recordings for my students to listen to	16	6%	8%	10%
Customize digital content I find online to meet my class needs	101	36%	33%	30%
Use student response devices (e.g. clickers)	47	17%	15%	17%
Use online quizzes for formative assessment	127	46%	41%	35%

8 **How important is the effective implementation of instructional technology to your students' success?**

Response	# of Responses	% of Responses	State %	National %
Not Important	3	1%	2%	3%
Somewhat Important	52	19%	20%	20%
Important	120	43%	43%	42%
Extremely Important	100	36%	32%	34%
No Opinion	2	1%	2%	1%

9 **Besides not having enough time in your school day, what obstacles do you face when using technology in your classroom? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
District policies limit the technology I can use	82	29%	22%	24%

I am concerned about Internet safety issues and liabilities	111	40%	36%	28%
I am concerned about the reliability of the technology	116	42%	46%	47%
I cannot use my own mobile device (e.g. laptop, smartphone, tablet)	48	17%	13%	15%
I need additional professional development on classroom technology tools	121	44%	43%	30%
I need additional professional development on how to effectively integrate technology into my instructional plan	104	37%	39%	31%
Internet access is too slow or unreliable for downloading digital content I want to use	97	35%	34%	33%
Lack of technology support	112	40%	38%	23%
Lack of support from administrators	21	8%	7%	6%
My students know more about the technology than I do	54	19%	17%	11%
Not all students and families have computer and Internet access at home	215	77%	73%	69%
Not enough computers for students to use	173	62%	53%	54%
School filters or firewalls block websites I need	107	38%	31%	33%
Technology that is available to me is outdated	55	20%	18%	20%
There are policies that restrict my access to Twitter, Facebook, Pinterest or other social media tools	48	17%	13%	16%
Other	35	13%	12%	9%

10 **How often do school filters and firewalls block websites that you want to use in your class?**

Response	# of Responses	% of Responses	State %	National %
Never	9	3%	8%	4%
Rarely	51	19%	25%	24%
Sometimes	153	56%	51%	48%
Often	52	19%	14%	19%
All of the time	7	3%	2%	4%

11 **Many schools are exploring how to leverage mobile devices such as laptops and tablets to improve student achievement. What would be the benefits of incorporating such devices into instruction? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Access to online textbooks	221	83%	76%	68%
Helps teachers improve their technology skills	169	64%	62%	58%
Improves teacher-parent-student communications	153	58%	57%	57%
Increases student engagement in school and learning	199	75%	75%	77%
Increases teacher productivity	140	53%	49%	45%
Provides personalized instruction for each student	148	56%	57%	59%
Provides a way for me to create a learning centered environment	130	49%	48%	49%
Provides a way for students to review classroom material after school	187	71%	68%	60%
Provides opportunities for informal remediation	126	48%	48%	53%
Students develop collaboration and teamwork skills	133	50%	47%	44%
Students develop critical thinking and problem solving skills	143	54%	50%	49%
Students develop stronger communication skills	112	42%	41%	38%
Student ownership of learning	174	66%	63%	60%
These devices help to extend learning beyond the school day	161	61%	60%	59%
Other	16	6%	6%	3%

12 **What is your biggest concern about students using mobile devices in your classroom? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
I am concerned students will cheat on tests	115	44%	34%	29%
I am concerned that students will be distracted doing other things (e.g. texting, playing games, or researching topics unrelated to class)	231	87%	82%	76%
I am worried that I might lose control of the class	28	11%	10%	11%
I don't have curriculum to support their use	54	20%	22%	24%
I don't know how to effectively integrate mobile devices into my instruction	45	17%	19%	23%

I don't know which features I could use for instruction	37	14%	15%	19%
Not all of my students have mobile devices	200	76%	73%	68%
Parents will not support the use of mobile devices	18	7%	8%	11%
Teaching my students how to use mobile devices responsibly	86	33%	31%	33%
Our school does not allow students to use mobile devices in class	12	5%	7%	18%
Not appropriate for the ages of my students	4	1%	6%	17%
I don’t see the value of using mobile devices within instruction	13	5%	5%	5%
Other	20	8%	7%	6%

13 **Are you teaching in a class where all of your students have access to at least one mobile device (e.g. tablet, laptop, Chromebook) to use regularly within instruction?**

Response	# of Responses	% of Responses	State %	National %
Yes, most students are using their own devices or we have devices for students who don't have them	56	21%	17%	11%
Yes, our school assigns devices to students for their use at school	18	7%	10%	12%
Yes, our school assigns devices to students to use at school and at home	14	5%	11%	8%
Yes, I can check out devices to use in my class as needed	57	21%	22%	21%
No, my students do not regularly have access to mobile devices in my classroom	148	56%	50%	53%

14 **What types of digital content are you currently using in your classroom? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
3D content	19	7%	7%	4%
Animations	60	23%	23%	20%
Electronic book subscriptions	40	15%	17%	14%
Game-based environments	27	10%	15%	28%
Google drive for education	131	49%	48%	40%
Intelligent adaptive software	17	6%	8%	4%
Online curriculum	82	31%	28%	34%

Online databases (e.g. census data, education statistics)	54	20%	18%	15%
Online periodical, news or journal subscriptions	73	28%	24%	16%
Online subscription service of digital resources	30	11%	14%	12%
Online textbooks	114	43%	34%	27%
Podcasts	18	7%	7%	6%
Powerpoints, Prezis	183	69%	66%	65%
Real-time data (e.g. population, weather, NASA, GOOGLE Earth, GIS etc.)	38	14%	18%	21%
Simulations	39	15%	14%	10%
Social media content	22	8%	8%	8%
Software/apps to help students develop skills (e.g. reading, writing, math, foreign language)	60	23%	27%	29%
Teaching aids such as lesson plans, interventions, assessment software	115	43%	41%	42%
Tutorials	96	36%	33%	23%
Videos that I create myself	31	12%	11%	12%
Videos that I find online (e.g. Kahn Academy, YouTube, NASA)	171	65%	63%	61%
Virtual field trips	15	6%	9%	16%
Virtual labs	20	8%	8%	7%
Other	20	8%	8%	5%

15 **Thinking about the use of game based software and applications for instructional purposes, what would be the primary reasons you would be interested in using digital or online games with your students? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Address the different learning styles in my classroom	163	63%	63%	70%
As a student engagement and motivation tool	180	70%	72%	79%
As a vehicle for introducing new concepts	123	48%	45%	46%
Collect assessment data on student proficiency	84	33%	35%	40%
Create a learner-centered classroom	107	42%	43%	44%
Facilitate student collaborative projects	69	27%	27%	28%
Increase the real world context of my curriculum	78	30%	31%	35%

Provide a way for students to visualize difficult concepts	114	44%	45%	49%
Provide immediate feedback to students on how much they had learned	109	42%	45%	47%
Provide more challenging schoolwork for students ready for it	93	36%	39%	39%
Provide opportunities for students to practice skills or knowledge	114	44%	47%	54%
Reinforce understanding and skill knowledge	114	44%	50%	56%
Schoolwork could be personalized to students' learning styles	79	31%	33%	37%
Students would be able to develop critical thinking and problem solving skills	85	33%	31%	35%
To differentiate instruction	161	63%	59%	60%
I don't see the value of using games within my classroom	27	10%	10%	5%
Other	3	1%	2%	1%

16 **What is your level of agreement? I regularly use formative assessment data about my students' strengths and weaknesses to tailor instruction and lessons to meet individual student needs.**

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	7	3%	4%	2%
Disagree	5	2%	3%	3%
Neither agree nor disagree	29	12%	13%	15%
Agree	141	57%	54%	54%
Strongly agree	65	26%	27%	25%

17 **We are interested in how teachers are using digital content and online resources in their classrooms. Which of these are true for you? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
I use the digital content that I find online just the way I find it without editing, modifying or customizing	103	41%	40%	37%
I customize the digital content I find online with my own ideas, materials and resources before using it in my classroom	143	57%	56%	53%
I review digital content and resources that I find online primarily to get ideas to help me create new lesson plans and classroom activities	146	58%	57%	57%

I regularly update my pre-existing lesson plans or classroom activities with digital content and resources that I found online	134	54%	50%	43%
I primarily create my own digital content and resources that I use in my classroom	39	16%	16%	14%
I regularly post digital content and resources that I create for my classroom online for other teachers to use	20	8%	8%	7%
I don't regularly use digital content or online resources in my classroom	24	10%	12%	13%

18 **Which of these factors would you consider most important when evaluating the quality of digital content to use in your classroom? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Content is free	198	80%	76%	76%
Content is fee-based	6	2%	3%	5%
No commercial advertisements within the content	123	50%	50%	53%
Includes embedded online assessments	82	33%	32%	30%
Research based	121	49%	50%	56%
Teacher evaluation of the materials	105	42%	41%	47%
Student achievement with the materials	98	40%	38%	40%
I can modify it to meet my classroom needs	188	76%	72%	70%
There is a mobile app version of the content	40	16%	14%	16%
Learned about it on a webinar or virtual conference	31	13%	10%	10%
Learned about the resource through a demonstration at a conference	35	14%	12%	15%
Recommended on education blogs and websites	44	18%	18%	23%
Textbook publisher recommendations	56	23%	19%	12%
Referred by a colleague	108	44%	46%	48%
Materials are created by practicing teachers	91	37%	38%	43%
Certified by education membership associations and organizations	45	18%	20%	16%
Compiled on a list by our State Department of Education or Ministry of Education	29	12%	11%	11%

Source is a content expert organization (e.g. National Science Foundation, universities)	67	27%	25%	23%
Source is an established media or content producer (e.g. NBC, Discovery, PBS)	63	25%	25%	24%
Source is an online curriculum company or organization	31	13%	12%	10%
Other	3	1%	2%	2%

19 **There is a trend in some schools where teachers assign videos of lectures or lessons for students to watch as homework. Then they utilize the classroom time period for more in-depth class discussions, projects, experiments, or to provide personalized coaching to individual students. Some call this "flipped learning". What are your thoughts or experiences with this new classroom model? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
I am doing this in my classroom with videos that I have found online	29	12%	11%	7%
I am doing this in my classroom using videos that I am creating of my own lessons or lectures	9	4%	4%	4%
I tried doing this last year but it did not work for me	19	8%	5%	3%
I am interested in trying it this year	58	24%	21%	17%
I am concerned that my students would not be able to access the videos at home	123	50%	46%	49%
To do this I would need instruction in how to make the videos	50	20%	19%	19%
To do this I would need instruction on how to find high quality videos online	42	17%	18%	16%
To do this I would need instruction on how to best utilize the classroom time	35	14%	14%	16%
I have heard about this but I am not interested	26	11%	15%	20%
I have never heard of this before	20	8%	9%	11%
Other	26	11%	14%	12%

20 **What is on your wish list for professional development from your school or district this year? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
How to develop an online course	49	20%	17%	10%
How to facilitate an online class	48	19%	16%	11%
Implementing a "flipped classroom" model	71	29%	26%	21%

Implementing a blended learning model in my classroom	88	36%	31%	23%
Using a tablet computer within instruction	66	27%	24%	30%
Using a variety of student owned mobile devices within instruction	62	25%	22%	22%
Using technology to differentiate instruction	132	54%	52%	51%
Using technology tools for formative assessment	107	43%	39%	32%
Using technology with special education or English language learning students	45	18%	22%	22%
How to create videos of my lessons and lectures for students to watch	53	22%	19%	18%
How to use education games within instruction	93	38%	33%	36%
Identifying mobile apps to use in the classroom with students	64	26%	25%	24%
Identifying high quality digital content to use within instruction	69	28%	27%	26%
Integrating digital content components into a comprehensive curriculum	43	17%	16%	16%
Using social media to keep parents informed	35	14%	14%	14%
Using social media with students	26	11%	10%	10%
Preparing for new state standards	70	28%	26%	25%
Preparing for the 2014/15 online assessments	62	25%	25%	27%
How to protect students' confidential data	45	18%	16%	12%
Other	10	4%	5%	4%

21 **What are your preferred methods for professional development? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
In-school mentoring program	77	31%	28%	28%
Observing other teachers in my content area and grade level	98	40%	40%	49%
Peer-to-peer or school study teams	85	35%	30%	29%
School or district provided trainings	117	48%	48%	53%
Ed Camps for teachers	42	17%	14%	12%
University or college course	59	24%	23%	17%

Summer institutes (sponsored by my local university/college, museums, professional associations etc.)	46	19%	17%	24%
Conference workshops or sessions led by experts in the field	132	54%	55%	53%
Workshops from the County Office of Education or educational services offices	25	10%	9%	16%
Workshops provided by textbook publishers, vendors or technology providers	44	18%	15%	10%
Online conferences or webinar series	47	19%	19%	18%
Online course- where instruction and content is delivered online	46	19%	17%	18%
Online course- blended format with some instruction online and some face-to-face	35	14%	12%	8%
MOOC (Massive Open Online Course)	9	4%	3%	3%
Digital badges or alternative micro credentialing	4	2%	1%	2%
Participating in a professional learning community or community of practice	62	25%	26%	20%
Watching TedTalks or other YouTube videos	70	28%	30%	23%
I find my own training resources when I need them	45	18%	18%	14%
Other	4	2%	2%	2%

22 **What is your experience with fully online or blended learning courses for your professional development? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
I have taken a fully online course offered by my school or district	32	13%	11%	19%
I have taken a fully online course offered through a local college or university	68	28%	29%	38%
I have participated in a blended learning course offered by my school or district where part of the instruction was face-to-face and part was online	22	9%	7%	15%
I have participated in a blended learning course offered through a local college or university	28	12%	12%	16%
I have participated in a MOOC (Massive Open Online Course)	8	3%	4%	4%

	I have no experience with either fully online or blended learning courses for my professional development	126	52%	54%	41%

23 **A new trend is emerging for teachers around the use of digital badges as a form of professional development recognition. A digital badge is an online image that acknowledges that you have developed a new skill or acquired knowledge after completing an activity, course, or self-paced tutorial. Regarding this new trend, which of these are true for you?**

	Response	# of Responses	% of Responses	State %	National %
	I have never heard of this before	189	78%	81%	81%
	I have earned one or more digital badges that support my professional work	18	7%	7%	6%
	I have earned one or more digital badges that support a personal hobby or interest (like through online games)	4	2%	1%	2%
	My school or district provides digital badges when I pursue self-directed professional development activities	3	1%	1%	2%
	I think this would be a good way for me to get recognition for my skills and knowledge that are developed outside of traditional school-based training activities	42	17%	15%	17%

24 **In the past year, which of these things have you done on your own (not district directed or part of a formalized professional development class) to improve your teaching effectiveness? (Check all that apply)**

	Response	# of Responses	% of Responses	State %	National %
	Attended a face-to-face conference	98	40%	41%	42%
	Participated in a webinar or online conference	82	34%	32%	28%
	Took a self-paced tutorial on a subject	95	39%	34%	25%
	Participated in a massive open online course (MOOC)	7	3%	4%	4%
	Took an online course	42	17%	16%	22%
	Took online assessments to test my own knowledge on a subject	65	27%	21%	17%
	Used a mobile application to learn about a subject that interested me	76	31%	30%	33%
	Listened to podcasts or watched videos about a topic I was interested in	103	43%	42%	41%
	Found a mentor online	1	0%	1%	2%

Found experts online who could answer my questions	32	13%	12%	13%
Posted a question to a blog or wiki	29	12%	11%	12%
Sought help from other teachers through my social networking site	27	11%	13%	20%
Used Twitter to communicate or to follow others	22	9%	11%	11%
Started a wiki or blog to share my ideas and connect me with others	8	3%	4%	3%
Provided online support to other teachers	30	12%	11%	10%
Created my own video or podcast to help me share my knowledge with others	12	5%	5%	4%
Pinned classroom/lesson plan ideas to Pinterest	30	12%	18%	33%
Found information on the Internet to help me prepare/deliver a lesson	134	55%	54%	59%
Took part in an online game or simulation	42	17%	16%	17%
Used a mobile application to help me with my self-organization	50	21%	24%	23%
None of the above	11	5%	5%	6%
Other	2	1%	2%	2%

25 **Have you received training or professional development from your school or district on how to protect student data that is collected as result of technology use in school?**

Response	# of Responses	% of Responses	State %	National %
Yes	39	17%	15%	25%
No	192	83%	84%	75%

26 **Imagine you are designing a dream school for 21st century learners. Which of these tools or strategies do you think holds the greatest potential for increasing student achievement and success? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Internet access anywhere at school	192	80%	80%	79%
Ability for students to use their own mobile devices at school	120	50%	47%	43%
Mobile device accessories (e.g. attachable keyboards, covers)	88	37%	33%	34%
School provides every student with a mobile device	155	65%	62%	59%

Databases, digital books, animations, and videos to help students with schoolwork	138	57%	57%	56%
Digital games or virtual simulations	102	42%	42%	44%
Software that changes the level of difficulty and content to address student needs	153	64%	63%	63%
"Digital backpack" that helps organize schoolwork and provides access to important information (e.g. take notes, organize, and view assignments)	115	48%	49%	43%
Mobile apps for learning	89	37%	38%	47%
Interactive whiteboards (e.g. Smartboard, Polyvision)	160	67%	65%	57%
Learning management systems (e.g. Blackboard)	51	21%	23%	27%
A handheld device for students to use to answer questions in class (e.g. clickers)	84	35%	31%	35%
3D printer	64	27%	24%	20%
Digital reader (e.g. Kindle, Nook)	70	29%	29%	31%
Digital media creation tools (e.g. video, audio)	73	30%	26%	26%
School mobile app	65	27%	24%	24%
Online or virtual classes	74	31%	28%	26%
Online tests and assessments	140	58%	53%	45%
Online textbooks	147	61%	56%	49%
Online tutors	89	37%	33%	36%
Social media tools for students to connect and work with others (e.g. blogs, wikis, social networking sites)	59	25%	24%	22%
Text messaging	45	19%	16%	17%
Google hangouts or other online group messaging in class	58	24%	22%	20%
Other	9	4%	4%	3%

27 **As a result of integrating technology within my instruction, my students are... (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Working together more often	91	39%	35%	35%
Participating more in discussions or group activities	77	33%	32%	32%

Developing their problem-solving and critical thinking skills	83	35%	35%	36%
Creating models and testing their assumptions	26	11%	12%	9%
Applying their knowledge to practical problems	72	31%	30%	30%
Better able to understand abstract concepts	56	24%	25%	24%
Developing their creativity	70	30%	32%	35%
More deeply exploring their ideas	63	27%	26%	26%
Gaining a better understanding of the class material through "trial and error"	64	27%	28%	26%
Spending more time on drill and practice	40	17%	19%	19%
Taking ownership for their learning	85	36%	38%	35%
More motivated to learn	85	36%	45%	50%
Learning that failure is an opportunity to learn	49	21%	19%	17%
Demonstrating higher levels of proficiency on standardized tests	26	11%	12%	10%
None of the above	40	17%	15%	13%
Other	12	5%	5%	4%

28 **How has the use of technology improved your effectiveness as a teacher? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
I am better organized	120	51%	50%	45%
I am creating more interactive lessons	102	43%	45%	47%
I am creating more relevant lessons	97	41%	42%	39%
I am facilitating student centered learning	103	44%	43%	38%
I am managing my class more effectively	73	31%	33%	29%
I am more connected to my students	72	30%	29%	25%
I am more productive	79	33%	34%	34%
I encourage students to be more self-directed	103	44%	40%	36%
I facilitate collaboration between students	74	31%	29%	25%
I give my students more personalized attention	54	23%	22%	21%
I have a better understanding of what my students are learning	56	24%	23%	22%
I have time to differentiate instruction	75	32%	28%	26%
I know when students are having problems with the content	63	27%	26%	22%

I spend more time with individual students to help them understand the content	48	20%	18%	17%
It's easier to assess how my students are doing	63	27%	29%	27%
It's easier to edit lesson plans for the future	79	33%	31%	30%
None of the above	18	8%	8%	8%
Other	12	5%	5%	2%

30 **Are you involved as a teacher, advisor or coordinator with any of these student programs at your school? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Apprenticeship Programs	24	11%	8%	2%
AVID (Advancement Via Individual Determination)	0	0%	0%	4%
Computer program club (coding)	3	1%	1%	2%
Future Teacher Academies	0	0%	0%	1%
Gear UP	1	0%	1%	1%
IB (International Baccalaureate)	0	0%	0%	1%
JROTC (Junior Reserve Officer Training Corps)	0	0%	0%	1%
MUN (Model United Nations) or Model Congress	1	0%	0%	0%
School Video Production Team	6	3%	2%	1%
STEM (Science, Technology, Engineering, and Mathematics) Academies	21	10%	8%	9%
Student Government	18	8%	7%	4%
Student Tech Support Team	5	2%	2%	1%
Talent Search	4	2%	2%	1%
Visual and Performing Arts Academies	4	2%	3%	3%
None of the above	153	71%	73%	78%

31 **Gender**

Response	# of Responses	% of Responses	State %	National %
Female	131	55%	64%	80%
Male	105	44%	36%	20%

32 **Highest level of educational attainment (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %

Associate degree	32	13%	9%	3%
Bachelor's degree	62	26%	25%	49%
Master's degree in education	104	43%	51%	47%
Master's degree other than education	42	17%	19%	10%
Doctorate (Ph.D., Ed.D.)	2	1%	1%	1%
Teaching certificate - elementary/multiple subject	23	9%	15%	20%
Teaching certificate - single subject	82	34%	28%	11%
National Board Certification	4	2%	2%	3%
Early childhood development certificate	1	0%	1%	4%
Paraprofessional certificate	1	0%	0%	1%
None of the above	2	1%	1%	0%
Other	34	14%	14%	6%

33 **At the end of this school year, how many years of teaching experience will you have?**

Response	# of Responses	% of Responses	State %	National %
This is my first year	4	2%	3%	3%
1 to 3	11	5%	4%	9%
4 to 10	62	26%	25%	27%
11 to 15	68	28%	28%	21%
16+	96	40%	40%	40%

34 **Race or Cultural Identity**

Response	# of Responses	% of Responses	State %	National %
American Indian/Alaskan Native	3	1%	1%	1%
Asian	1	0%	1%	2%
Black/African-American	6	3%	4%	5%
Caucasian/White (non-Hispanic)	171	72%	76%	73%
Hispanic/Latino	9	4%	3%	10%
Native Hawaiian/Other Pacific Islander	1	0%	0%	1%
Decline to state	42	18%	15%	8%
Other	13	5%	4%	2%

35 **Are you a member of ISTE (the International Society for Technology in Education) or one of the ISTE affiliated organizations?**

Response	# of Responses	% of Responses	State %	National %
Yes, I am a member of the international organization, ISTE	1	0%	1%	2%
Yes, I am a member of an ISTE affiliated organization	1	0%	1%	1%
No, not a member	235	99%	98%	97%

Appendix H: Speak UP Library Media Survey

2019 Speak Up Survey

Speak Up 2019

Librarians & Media Specialists

District: Connecticut Technical Education and Career System

Results based on 14 survey(s).
Note: Survey responses are based upon the number of individuals that responded to the specific question.

1 **What is your current job responsibility?**

Response	# of Responses	% of Responses	State %	National %
Librarian	1	7%	7%	16%
Librarian Media Specialist	13	93%	80%	41%
Library Assistant	0	0%	3%	5%
Media Specialist	0	0%	3%	5%
Teacher Librarian	0	0%	0%	14%
Instructional Technology Specialist	0	0%	7%	10%
Other	0	0%	0%	8%

2 **Where do you primarily work?**

Response	# of Responses	% of Responses	State %	National %
School Site	14	100%	97%	95%
District	0	0%	3%	4%
Other	0	0%	0%	1%

3 **How would you rate your technology skills?**

Response	# of Responses	% of Responses	State %	National %

	Advanced - My skills are more advanced than most adults I know	11	79%	79%	63%
	Average - My skills are similar to those of the adults I know	3	21%	21%	35%
	Beginner - I 'm just learning to use technology tools	0	0%	0%	1%

4 **Which of these mobile devices do you have for your own use? (Check all that apply)**

	Response	# of Responses	% of Responses	State %	National %
	A phone with no Internet	2	14%	30%	14%
	A Smartphone with Internet (e.g. iPhone, Samsung Galaxy)	11	79%	87%	86%
	Laptop	11	79%	83%	88%
	2-in-1 laptop (a laptop that can turn into a tablet)	0	0%	27%	9%
	A web-based laptop (e.g. Chromebook)	1	7%	13%	14%
	Tablet (e.g. iPad)	8	57%	77%	73%
	Digital reader (e.g. Kindle, Nook)	2	14%	43%	50%

5 **How important is the effective implementation of instructional technology to the success of students in your school/district/community?**

	Response	# of Responses	% of Responses	State %	National %
	Not important	0	0%	0%	0%
	Somewhat important	0	0%	7%	6%
	Important	7	50%	37%	25%
	Extremely important	7	50%	57%	69%
	No opinion	0	0%	0%	0%

6 **How do you use technology to support teachers and students? (Check all that apply)**

	Response	# of Responses	% of Responses	State %	National %
	Make purchasing recommendations for technology (e.g. hardware, software, subscription services, electronic resources, digital content, etc.)	8	67%	76%	65%
	Answer questions about how to use various types of technology (e.g. software or hardware)	10	83%	88%	88%
	Manage website or portal	6	50%	56%	59%

Upload resources to library portal (e.g. digital content, presentations, podcasts, recommended websites, articles, e-book)	6	50%	64%	62%
Identify text-based resources (e.g. electronic textbooks, newspapers, magazines, digital archives, digital libraries)	11	92%	92%	73%
Acquire and catalogue resources online	9	75%	76%	65%
Manage online subscriptions	4	33%	32%	45%
Publish list of instructional resources	5	42%	60%	57%
Conduct Internet research for teachers	10	83%	72%	70%
Support students' research tasks	12	100%	96%	93%
Provide information about teaching digital citizenship and/or media literacy to teachers	8	67%	76%	66%
Provide instruction directly to students about digital citizenship	9	75%	80%	74%
Provide instruction to students about information and media literacy skills	12	100%	96%	85%
Create technology lessons for teachers	6	50%	40%	35%
Create videos, podcasts, or multi-media presentations for instructional purposes	5	42%	48%	51%
Find education mobile apps appropriate for classroom use	7	58%	56%	50%
Find digital content (e.g. games, animations, simulations, 3D content) for teachers to use in their lessons	5	42%	44%	51%
Find podcasts, videos, or presentations that can be used in lessons	5	42%	52%	55%
Help teachers create videos, podcasts, or multi-media presentations	4	33%	44%	39%
Help teachers with online assessments	6	50%	36%	36%
Help teachers set up flipped classrooms	1	8%	4%	17%
Help teachers set up blended learning environments	3	25%	12%	24%
Train teachers about how to locate or evaluate digital content	7	58%	48%	47%
Participate with teachers in a professional learning community	11	92%	84%	74%
Other	0	0%	8%	5%

7 **What types of digital content do you regularly recommend to teachers? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
3D Content	0	0%	4%	4%
Animations	1	8%	20%	22%
Electronic book subscriptions	1	8%	28%	45%
Game-based environments	0	0%	4%	24%
Google drive for education	10	83%	72%	58%
Intelligent adaptive software	1	8%	8%	6%
Online curriculum	4	33%	28%	39%
Online databases (e.g. census data, education statistics)	9	75%	68%	68%
Online periodical, news, or journal subscriptions	7	58%	68%	57%
Online subscription service of digital content	5	42%	48%	45%
Online textbooks	4	33%	24%	22%
Podcasts	1	8%	16%	16%
Powerpoints, Prezis	8	67%	72%	59%
Real-time data (e.g. population, weather, NASA, GOOGLE earth, GIS, etc.)	3	25%	28%	39%
Simulations	1	8%	12%	14%
Social media content	2	17%	24%	29%
Software/apps to help students develop skills (e.g. reading, writing, math, foreign language)	6	50%	48%	46%
Teaching aids such as lesson plans, interventions, assessment software	6	50%	40%	44%
Tutorials	8	67%	56%	40%
Videos that I create myself	3	25%	36%	24%
Videos that I find online (e.g. Kahn Academy, YouTube, NASA)	7	58%	64%	55%
Virtual field trips	2	17%	12%	34%
Virtual labs	0	0%	8%	10%
This is not part of my current job responsibilities	1	8%	8%	9%
Other	0	0%	4%	2%

8 **How do you learn about new digital content that you could recommend to teachers? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Ask other librarians for recommendations	7	58%	68%	73%
Attend webinars or virtual conferences	6	50%	56%	59%
Attend conferences	9	75%	80%	67%
Look at the resources students are using	8	67%	60%	61%
Review recommendations in education blogs or wikis	8	67%	72%	62%
Through the online communities of which I'm a member	7	58%	68%	55%
Through various social media channels	5	42%	60%	50%
Use Twitter to ask others about the resources they are using	3	25%	36%	22%
Conduct Internet search	10	83%	84%	79%
Review journal articles	8	67%	68%	57%
Look for resources published by content expert organization (e.g. National Science Foundation, universities)	4	33%	52%	41%
Look for resources published by established media or content producer (e.g. NBC, Discovery, PBS)	6	50%	56%	56%
Use resources recommended by my school district	11	92%	76%	71%
Review recommendations from education membership associations or organizations	8	67%	60%	47%
Review recommendations from State Department of Education or Ministry of Education	4	33%	36%	27%
Other	0	0%	4%	4%

9 **Which of these factors would you consider most important when evaluating the quality of digital content? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Accuracy of the content	11	92%	92%	94%
Research based	9	75%	80%	70%
Created by practicing teachers	5	42%	36%	36%
Teacher evaluations of the materials	7	58%	60%	49%
Student achievement with the materials	6	50%	48%	48%

Credibility of the organization publishing the materials	7	58%	72%	81%
Credibility of the person or organization that referred the resource to me	5	42%	44%	46%
Is highly engaging and interactive	10	83%	76%	74%
Ease of use for teacher and student	11	92%	96%	90%
Can be used for basic skills development in a specific subject area	9	75%	68%	49%
Can be used to develop students' higher order thinking skills	10	83%	76%	67%
Can be used in a variety of instructional settings (e.g. in class, afterschool, independent study)	10	83%	76%	60%
Teachers can use it in a variety of ways (e.g. whole class instruction, group work, individual projects)	9	75%	76%	68%
Students have the ability to use the digital content at school or home	9	75%	80%	66%
Alignment to curriculum and standards (district, state, national or province)	9	75%	84%	69%
Includes embedded online assessments	5	42%	28%	18%
Can be easily integrated into our digital content library or learning management system	6	50%	40%	37%
There is a mobile app version of the content	0	0%	4%	17%
Other	0	0%	0%	1%

10 **What would be the primary benefits of more digital content usage at your school? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Cost savings	9	75%	72%	40%
Decreases dependence on textbook publishers	5	42%	44%	34%
Differentiates our school (district) as innovative in the use of technology	7	58%	68%	53%
Helps to extend learning beyond the school day	10	83%	84%	72%
Improves quality of instructional materials	10	83%	68%	68%
Improves teacher productivity	5	42%	48%	45%
Improves teacher skills with technology	7	58%	68%	57%
Increases relevancy of the instructional materials	10	83%	80%	61%

Increases student engagement in school and learning	9	75%	84%	85%
Increases teacher buy-in if the content is teacher created	6	50%	32%	23%
Makes use of the technology that we have in the classrooms or media labs	8	67%	64%	60%
Provides a way for instruction to be personalized for each student	11	92%	72%	65%
Other	0	0%	0%	2%

11 **Besides time, what top challenges do you face when helping teachers integrate digital content into their lessons? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Lack of administrative support	1	9%	5%	11%
Lack of funding to purchase digital content	8	73%	68%	59%
Lack of computer access at school (or district)	9	82%	41%	41%
Students do not have access to computers or the Internet outside of school	6	55%	36%	49%
Internet bandwidth is insufficient to support digital content use	6	55%	32%	34%
School filters and firewalls block access to the content	6	55%	45%	45%
Reliable, consistent access to digital content	6	55%	45%	33%
Digital content is not organized in the appropriate scope and sequence	2	18%	18%	10%
Digital content is not provided as part of our textbooks	1	9%	23%	10%
Using digital content to create meaningful learning experiences	5	45%	41%	22%
Locating appropriate types of digital content for specific instructional strategies	3	27%	23%	28%
Helping teachers move from sporadic to sustained usage	5	45%	59%	52%
Teachers are not comfortable incorporating digital content into their lessons	9	82%	77%	46%
Teachers are not interested in incorporating digital content into their lessons	4	36%	45%	24%
Other	2	18%	9%	9%

12 **How often do school filters and firewalls block websites that you or teachers at your school want to use within instruction?**

Response	# of Responses	% of Responses	State %	National %
Never	0	0%	0%	1%
Rarely	2	20%	33%	19%
Sometimes	5	50%	52%	54%
Often	3	30%	14%	22%
All of the time	0	0%	0%	3%

13 **Which of these are true of teachers at your school in regards to their use of digital content and online resources in their classrooms? Our teachers are… (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Using digital content they find online just the way they find it with out editing, modifying, or customizing	2	25%	56%	62%
Customizing the digital content and resources they find with their own ideas, materials, and resources before using it in their classroom	2	25%	33%	41%
Reviewing digital content and resources they find online primarily to get ideas to help with creating new lesson plans and classroom ideas	3	37%	50%	52%
Regularly updating pre-existing lesson plans or classroom activities with digital content and resources they find online	1	12%	28%	39%
Primarily creating their own digital content and resources for their classrooms	2	25%	17%	17%
Regularly posting the digital content and resources that they create for their classroom online for other teachers	0	0%	0%	10%
Not regularly using digital contact or online resources in their classrooms	4	50%	44%	32%
Other	1	12%	6%	8%

14 **Which of the following professional development experiences or resources would be most effective in helping teachers better use digital content in their classroom?**

Response	# of Responses	% of Responses	State %	National %
Access to a collection of vetted, grade-level, content specific resources	8	80%	62%	65%

Downloadable whitepapers or reports that a teacher can review on their own time	1	10%	19%	13%
Series of webinars about specific kinds of digital content	3	30%	38%	34%
Face-to-face professional development	8	80%	76%	73%
Mentoring by an instructional coach on site	7	70%	76%	59%
Support from a library media specialist who can help with digital content identification and usage	7	70%	71%	54%
Online mentoring by a content specific expert	4	40%	19%	16%
Participation in a professional learning community at his/her school	7	70%	67%	45%
Participation in an online community of practice with like-minded teachers	4	40%	33%	28%
Blogs, wikis, and chat rooms where teachers can share success stories, struggles, and challenges	5	50%	48%	24%
Facebook-type environment for sharing best practices and ideas	2	20%	24%	22%
Collection of relevant podcasts	3	30%	14%	15%
Video clips of teachers demonstrating use of digital content in their content area	4	40%	48%	48%
Online course	3	30%	29%	18%
Other	2	20%	10%	4%

15 **In the past year, which of these things have you done on your own (not district directed or part of a formalized professional development class) to improve your leadership capabilities or professional skills? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Attended a face to face conference	7	70%	71%	62%
Participated in a webinar or online conference	8	80%	71%	66%
Took a self-paced tutorial on a subject	4	40%	57%	53%
Participated in a massive open online course (MOOC)	2	20%	19%	8%
Took an online course	1	10%	14%	28%
Took online assessments to test my own knowledge on a subject	1	10%	24%	25%
Used a mobile application to learn about a subject that interested me	3	30%	48%	51%

Listened to podcasts or watched videos about a topic that interested me	7	70%	67%	66%
Found a mentor online	0	0%	5%	4%
Found experts online who could answer my questions	3	30%	29%	29%
Posted a question to a blog or wiki	3	30%	38%	30%
Sought help from others through a social networking site	2	20%	43%	41%
Used Twitter to communicate or to follow others	3	30%	52%	36%
Started a wiki or blog to share my ideas and connect me with others	2	20%	19%	13%
Provided online support to teachers or other colleagues	2	20%	38%	37%
Created my own video or podcast to help me share my knowledge with others	2	20%	24%	20%
Pinned classroom/lesson plan ideas to Pinterest	0	0%	10%	42%
Took part in an online game or simulation	1	10%	10%	22%
Used mobile applications to help me with my self-organization	1	10%	29%	46%
Other	1	10%	10%	3%

16 **Imagine you are designing a dream school for 21st century learners. Which of these tools or strategies holds the greatest potential for increasing student achievement and success? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Internet access anywhere at school	11	100%	91%	88%
Ability for students to use their own mobile devices at school	4	36%	50%	60%
Mobile device accessories (e.g. attachable keyboards, covers)	2	18%	36%	36%
School provides every student with a mobile device	9	82%	77%	64%
Databases, digital books, animations, and videos to help students with schoolwork	7	64%	77%	79%
Digital games or virtual simulations	1	9%	32%	46%
Software that changes the level of difficulty and content to address student needs	7	64%	77%	74%

"Digital backpack" that helps organize schoolwork and provides access to important information (e.g. take notes, organize, and view assignments)	6	55%	68%	60%
Mobile apps for learning	7	64%	77%	58%
Interactive whiteboards (e.g. Smartboard, Polyvision)	10	91%	82%	56%
Learning management systems (e.g. Blackboard)	6	55%	55%	40%
A handheld device for students to use to answer questions in class (e.g. clickers)	2	18%	27%	34%
3D printer	4	36%	45%	30%
Digital reader (e.g. Kindle, Nook)	4	36%	45%	38%
Digital media creation tools (e.g. video, audio)	4	36%	59%	54%
School mobile app	3	27%	27%	32%
Online or virtual classes	4	36%	27%	38%
Online tests and assessments	4	36%	50%	44%
Online textbooks	9	82%	73%	50%
Online tutors	6	55%	32%	40%
Social media tools for students to connect and work with others (e.g. blogs, wikis, social networking sites)	5	45%	59%	44%
Text messaging	4	36%	18%	21%
Google hangouts or other online group messaging in class	8	73%	59%	37%
Other	0	0%	0%	6%

17 **In addition to knowing core content subjects, which of these information and media literacy skills are most important for students to learn? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Ability to identify information sources and how to locate them	9	90%	95%	90%
Ability to evaluate the relevance, authenticity, and credibility of resources	10	100%	100%	95%
Ability to evaluate their own work to improve their effectiveness	9	90%	90%	81%
Ability to organize information	9	90%	86%	87%

	Know how to analyze and interpret stories, commercials, and the media (e.g. TV, magazines, newspapers, blogs, etc.)	8	80%	86%	68%
	Know how to detect bias, censorship, or propaganda in resources (including media)	9	90%	95%	80%
	Know how to prepare written or verbal reports of research	9	90%	81%	78%
	Know how to produce blogs, vlogs, podcasts, digital storytelling, or video	7	70%	52%	48%
	Know how to summarize research	9	90%	86%	81%
	Know how to use technology and digital content responsibly	10	100%	95%	90%

19 **Gender**

	Response	# of Responses	% of Responses	State %	National %
	Female	6	60%	70%	91%
	Male	4	40%	30%	9%

20 **Which of these degrees or certifications do you currently hold?**

	Response	# of Responses	% of Responses	State %	National %
	Associate degree	0	0%	0%	8%
	Bachelor degree	3	27%	50%	51%
	Master's degree in Education	1	9%	18%	18%
	Master's degree in Education (with specialization in library media)	2	18%	18%	15%
	Master's degree in Educational/Instructional Technology/Learning Technology	2	18%	27%	13%
	Master's degree in Library Science	6	55%	45%	43%
	Master's degree in a specialty other than Education	1	9%	9%	5%
	National Board Certification	0	0%	0%	6%
	Teaching credential	4	36%	36%	20%
	Doctorate (Ph.D., Ed.D.)	0	0%	0%	1%
	None of the above	0	0%	0%	3%
	Other	2	18%	14%	13%

21 **At the end of this school year, how many years of experience will you have as a librarian or media specialist?**

Response	# of Responses	% of Responses	State %	National %
This is my first year	0	0%	0%	7%
1 to 3	1	9%	18%	13%
4 to 10	2	18%	18%	29%
11 to 15	3	27%	27%	20%
16+	5	45%	36%	31%

22 **Race or Cultural Identity**

Response	# of Responses	% of Responses	State %	National %
American Indian/Alaskan Native	0	0%	5%	1%
Asian	0	0%	0%	1%
Black/African-American	0	0%	0%	4%
Caucasian/White (non-Hispanic)	8	73%	77%	83%
Hispanic/Latino	0	0%	0%	5%
Native Hawaiian/Other Pacific Islander	0	0%	0%	1%
Decline to state	3	27%	18%	7%
Other	0	0%	0%	1%

23 **Are you a member of ISTE (the International Society for Technology in Education) or one of the ISTE affiliated organizations?**

Response	# of Responses	% of Responses	State %	National %
Yes, I am a member of the international organization, ISTE	1	9%	18%	9%
Yes, I am a member of an ISTE affiliated organization	2	18%	14%	9%
No, not a member	8	73%	68%	83%

24 **Are you a member of the American Association of School Librarians (AASL) or one of the state affiliates?**

Response	# of Responses	% of Responses	State %	National %
Yes, I am a member of AASL	4	36%	50%	22%
Yes, I am a member of an AASL state affiliate	5	45%	27%	26%
No, not a member	4	36%	36%	57%

Appendix I: Speak UP Community Survey

2019 Speak Up Survey

Speak Up 2019

Community Members and Business Partners

District: Connecticut Technical Education and Career System

Results based on 19 survey(s).
Note: Survey responses are based upon the number of individuals that responded to the specific question.

1 **Which of these best describes your role in the community (in relation to the local schools)?**

Response	# of Responses	% of Responses	State %	National %
School or district employee (but not a teacher or administrator)	14	74%	75%	79%
School board member	0	0%	0%	0%
After school or informal educator	0	0%	0%	1%
Business leader or employer	2	11%	6%	1%
Child care provider	0	0%	0%	0%
Civic leader	0	0%	0%	0%
Concerned citizen	0	0%	0%	2%
Grandparent of school aged children	0	0%	0%	2%
Homeowner	0	0%	0%	2%
Parents of children already graduated or too young to attend	0	0%	0%	2%
Philanthropist	0	0%	0%	0%
School volunteer	0	0%	0%	1%

Tutor	0	0%	8%	0%
Other	3	16%	11%	8%

2 **How do you use technology to assist you with your professional and personal tasks? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Conduct Internet research	18	95%	94%	85%
Read online using a digital reader or tablet	7	37%	39%	43%
Read or post blog or wiki entries	2	11%	8%	22%
Use mobile apps for professional tasks	4	21%	25%	39%
Use Internet-based services (e.g. Google drive, Dropbox)	17	89%	81%	77%
Create presentations (e.g. PowerPoint, Prezi)	16	84%	58%	52%
Use tablets as part of my work activities	4	21%	25%	28%
Communicate with colleagues, friends and family using text messaging	10	53%	58%	73%
Use email to communicate with colleagues, friends, and family	18	95%	94%	92%
Participate in webinars or video conferences	11	58%	39%	45%
Take an online class	4	21%	22%	38%
Use Twitter as to follow people and share ideas	2	11%	8%	15%
Update my profile on a social networking site (e.g. LinkedIn or Facebook)	5	26%	31%	41%
Learn how to do something from an online video	13	68%	58%	63%
Create and post videos about things that interest me	2	11%	8%	15%

3 **How would you rate your technology skills?**

Response	# of Responses	% of Responses	State %	National %
Advanced - My skills are more advanced than most adults I know	4	21%	28%	29%
Average - My skills are similar to those of the adults I know	15	79%	72%	65%
Beginner - I'm just learning to use technology tools	0	0%	0%	6%

4 **Which of these mobile devices do you have for your own use? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
A phone with no Internet	1	5%	3%	16%
A Smartphone with Internet (e.g. iPhone, Samsung Galaxy)	17	89%	94%	84%
Laptop	14	74%	69%	75%
2-in-1 laptop (a laptop that can turn into a tablet)	0	0%	11%	5%
A web-based laptop (e.g. Chromebook)	3	16%	8%	7%
Tablet (e.g. iPad)	12	63%	61%	56%
Digital reader (e.g. Kindle, Nook)	2	11%	28%	33%

5 **What kind of Internet access do you have at home? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
A slow internet connection (e.g. dialup through a landline)	0	0%	0%	2%
A fast internet connection (e.g. DSL, Broadband, or cable)	12	63%	58%	60%
A WiFi connection	17	89%	83%	71%
A mobile data plan (e.g. 3G/4G/LTE)	5	26%	33%	41%
No home access. I use free internet (e.g. public library, WiFi hotspot)	0	0%	0%	1%
No home access. My primary access is at my place of work	0	0%	0%	3%

6 **Have you ever taken a fully online or virtual course for your own purposes? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Yes - through my work or job	6	46%	41%	39%
Yes - on my own to learn new skills	1	8%	4%	28%
Yes - to explore a personal interest or hobby	1	8%	4%	17%
Yes - as part of college or an academic program	3	23%	30%	34%
Yes - for compliance such as online traffic school	1	8%	4%	8%
No - but I would be interested in taking an online course if it was an option for me	4	31%	30%	23%

	No - and I don't think I would be interested in taking an online course	1	8%	11%	13%

7 **Which of these do you think are the biggest challenges facing school district leaders today? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Adequate funding	10	77%	59%	80%
Adequate school facilities	6	46%	41%	41%
Educational equity	3	23%	30%	28%
School safety	7	54%	41%	37%
Closing the achievement gap	9	69%	48%	42%
Serving diverse student populations	7	54%	41%	48%
High school graduation rates	5	38%	22%	25%
Incorporation of college and career ready skill development into curriculum	8	62%	48%	30%
District public image in the community	4	31%	22%	20%
Communications with parents	7	54%	48%	39%
Adequate technology	6	46%	30%	40%
Use of technology within instruction	4	31%	37%	36%
Achievement measured by standardized test scores	3	23%	18%	33%
Using data to assess student achievement	3	23%	18%	24%
Using student data to evaluate teacher performance	6	46%	33%	27%
Adherence to curriculum standards (e.g. state, national, provincial)	3	23%	26%	21%
Preparing for online assessments	2	15%	15%	15%
Special education issues and legal compliance	4	31%	30%	31%
Legislative mandates	7	54%	41%	26%
Recruitment and retention of highly qualified teachers	8	62%	37%	36%
Staff morale/motivation	6	46%	48%	52%
Students' behavior/attendance issues	9	69%	48%	56%
Students' health including substance abuse, teen pregnancy, family issues	4	31%	26%	27%

	Other	2	15%	7%	7%

8 **What concerns do you have about the future for students that live in your community? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Not being as well off as their parents financially	3	21%	37%	30%
Having to compete with better educated workers across the globe for jobs	6	43%	44%	47%
Not being able to afford a home in the local community	8	57%	56%	38%
Not being able to graduate from high school	4	29%	15%	30%
Not getting into a good college	5	36%	30%	30%
Having to live with their parents as an adult	6	43%	44%	32%
Having to have more than a college degree to get a good job	3	21%	37%	42%
Not learning the skills in school needed to be successful in the future	11	79%	59%	61%
Not knowing how to use technology in the workplace	4	29%	18%	26%
Other	2	14%	15%	9%

9 **Besides having strong subject area knowledge (e.g. English, math, science, history) which of these skills do you think are most important for today's youth to learn to be successful in the future? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Ability to communicate in more than one language	7	50%	39%	48%
Effective communications through public speaking	9	64%	61%	59%
Effective communications through writing	10	71%	61%	70%
Ability to work with a diverse group of people	12	86%	75%	75%
Ability to learn new skills independently	8	57%	61%	71%
Appreciation of the arts	4	29%	21%	26%
Awareness of global issues	8	57%	54%	47%
Understanding of civics and community responsibilities	9	64%	57%	53%

	Financial literacy - understanding personal finances	12	86%	86%	71%
	Being creative and "thinking outside of the box"	8	57%	43%	55%
	Critical thinking and problem solving skills	11	79%	61%	77%
	Information and media literacy skills	3	21%	11%	33%
	Leadership skills	6	43%	32%	52%
	Teamwork and collaboration skills	9	64%	71%	73%
	Research skills	4	29%	36%	42%
	Technology skills	5	36%	25%	57%
	Other	0	0%	4%	4%

10 **Based upon your response to question 9, what do you think is the best way for today's youth to acquire these skills? (Check all that apply)**

	Response	# of Responses	% of Responses	State %	National %
	Take a coding or programming class	3	25%	12%	14%
	Take advanced science or math classes	4	33%	23%	25%
	Take fully online or virtual courses	4	33%	23%	15%
	Take a special course to improve technology skills	4	33%	19%	37%
	Take pre-professional or vocational classes	5	42%	27%	42%
	Learn an additional language	4	33%	35%	41%
	Conduct scientific experiments or research projects	3	25%	15%	22%
	Keep updated on global current affairs	7	58%	46%	43%
	Pursue artistic and/or performance interests	3	25%	23%	23%
	Pursue public speaking opportunities through clubs or volunteer activities	7	58%	58%	42%
	Participate in school leadership opportunities	8	67%	54%	58%
	Work on group projects in class	5	42%	50%	60%
	Participate in a team sport or academic group	6	50%	50%	53%
	Use technology within his/her classes	5	42%	35%	63%
	Use technology outside of school to pursue academic interests	5	42%	27%	48%

Gain work experience through a job, internship, or volunteering	9	75%	69%	75%
Participate in after school or summer academic programs	6	50%	31%	47%
Other	1	8%	12%	6%

11 **How important do you think it is for every student to have access to high speed Internet connections to support their schoolwork?**

Response	# of Responses	% of Responses	State %	National %
Very unimportant	1	8%	8%	9%
Unimportant	0	0%	0%	1%
Neither important nor unimportant	0	0%	12%	5%
Important	5	42%	42%	36%
Very important	6	50%	37%	49%

12 **What do you think your community could do to increase student access to the Internet for schoolwork, both in school and out of school? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Pass bond measures or local taxes to help schools expand or improve their connections to the Internet	4	33%	22%	28%
Provide funding so that schools can keep their computer labs open after school, in the evenings and on the weekends for student access	8	67%	48%	46%
Put pressure on local Internet providers to offer lower costs options for families with school aged children	8	67%	61%	57%
Recycle old computers and mobile devices for use by students and families	7	58%	48%	50%
Expand the number of computers and the Internet connections at the public library or community recreation centers	6	50%	43%	46%
Encourage local businesses to provide after hours Internet access for students	5	42%	30%	25%
Provide more free WiFi hotspots around the community	12	100%	78%	61%
Become a wired city or town with free high speed Internet access anywhere (e.g. Google Fiber)	7	58%	48%	47%

	Educate parents and families about low cost Internet access packages for homes	5	42%	35%	52%
	Hold community workshops to educate parents and students about Internet safety and digital citizenship	8	67%	52%	49%

13 **How important do you think it is for every student to be able to use a mobile device like a laptop, tablet, or Chromebook during the school day to support schoolwork?**

	Response	# of Responses	% of Responses	State %	National %
	Very unimportant	1	8%	8%	8%
	Unimportant	1	8%	8%	4%
	Neither important nor unimportant	1	8%	25%	15%
	Important	5	42%	33%	40%
	Very important	4	33%	25%	33%

14 **If you were on a technology committee for a new school, which of these would you recommend as a good investment to enhance student achievement? (Check all that apply)**

	Response	# of Responses	% of Responses	State %	National %
	Internet access any where at school	11	92%	95%	71%
	Ability for students to use their own mobile devices at school	5	42%	45%	35%
	Mobile device accessories (e.g. attachable keyboards, covers)	2	17%	23%	20%
	School provides every student with a mobile device	1	8%	14%	31%
	Databases, digital books, animations, and videos to help students with schoolwork	6	50%	50%	50%
	Digital games or virtual simulations	1	8%	9%	18%
	Software that changes the level of difficulty and content to address student needs	8	67%	59%	60%
	"Digital backpack" that helps organize schoolwork and provides access to important information (e.g. take notes, organize, and view assignments)	5	42%	32%	44%
	Mobile apps for learning	8	67%	64%	46%
	Interactive whiteboards (e.g. Smartboard, Polyvision)	8	67%	55%	52%
	Learning management systems (e.g. Blackboard)	5	42%	27%	30%

	A handheld device for students to use to answer questions in class (e.g. clickers)	3	25%	23%	26%
	3D printer	1	8%	5%	12%
	Digital reader (e.g. Kindle, Nook)	1	8%	14%	23%
	Digital media creation tools (e.g. video, audio)	1	8%	9%	22%
	School mobile app	4	33%	27%	30%
	Online or virtual classes	4	33%	32%	34%
	Online tests and assessments	5	42%	32%	39%
	Online textbooks	9	75%	64%	49%
	Online tutors	9	75%	50%	45%
	Social media tools for students to connect and work with others (e.g. blogs, wikis, social networking sites)	4	33%	32%	22%
	Text messaging	2	17%	9%	10%
	Google hangouts or other online group messaging in class	3	25%	14%	15%
	Other	1	8%	5%	4%

16 **Gender**

Response	# of Responses	% of Responses	State %	National %
Female	11	85%	87%	86%
Male	2	15%	12%	14%

17 **Age**

Response	# of Responses	% of Responses	State %	National %
Under 29	2	15%	13%	9%
30-39	3	23%	26%	18%
40-49	4	31%	26%	25%
50-59	3	23%	22%	33%
60-69	1	8%	13%	14%
70 +	0	0%	0%	1%

18 **Race or Cultural Identity**

Response	# of Responses	% of Responses	State %	National %
American Indian/Alaskan Native	0	0%	0%	2%

Asian	0	0%	0%	2%
Black/African-American	0	0%	0%	7%
Caucasian/White (non-Hispanic)	10	77%	78%	68%
Hispanic/Latino	2	15%	9%	13%
Native Hawaiian/Other Pacific Islander	0	0%	0%	1%
Decline to state	0	0%	9%	7%
Other	1	8%	4%	2%

19 **Highest level of educational attainment**

Response	# of Responses	% of Responses	State %	National %
Less than high school diploma	0	0%	0%	1%
High school diploma	0	0%	0%	10%
Trade school	0	0%	0%	2%
Some college	2	15%	21%	29%
Bachelor's degree	4	31%	37%	25%
Graduate Education (e.g. Masters, Doctorate, etc.)	7	54%	42%	33%

Appendix J: Speak UP - Parent Survey

Speak Up 2019

Parent Survey

District: Connecticut Technical Education and Career System

Results based on 176 survey(s).
Note: Survey responses are based upon the number of individuals that responded to the specific question.

1 **Please select the grades of your child(ren) in school this year.**

Response	# of Responses	% of Responses	State %	National %
Preschool	0	0%	2%	4%
Kindergarten - Grade 1 - Grade 2	3	2%	21%	32%
Grade 3 - Grade 4 - Grade 5	10	6%	23%	36%
Grade 6 - Grade 7 - Grade 8	15	9%	32%	36%
Grade 9 - Grade 10 - Grade 11 - Grade 12	174	100%	47%	32%
Other	3	2%	1%	1%

2 **How would you rate your technology skills?**

Response	# of Responses	% of Responses	State %	National %
Advanced - My skills are more advanced than most adults I know	63	36%	34%	40%
Average - My skills are similar to those of the adults I know	100	57%	61%	57%
Beginner - I'm just learning to use technology tools	11	6%	5%	3%

3 **Which of these mobile devices do you have for your own use? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %

	A phone with no Internet	24	14%	12%	11%
	A Smartphone with Internet (e.g. iPhone, Samsung Galaxy)	146	84%	89%	92%
	Laptop	131	76%	80%	81%
	2-in-1 laptop (a laptop that can turn into a tablet)	6	3%	7%	8%
	A web-based laptop (e.g. Chromebook)	12	7%	6%	8%
	Tablet (e.g. iPad)	81	47%	60%	68%
	Digital reader (e.g. Kindle, Nook)	62	36%	37%	40%

4 **What kind of Internet access do you have at home? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
A slow internet connection (e.g. dialup through a landline)	1	1%	2%	2%
A fast internet connection (e.g. DSL, Broadband, or cable)	123	71%	64%	66%
A WiFi connection	125	72%	77%	76%
A mobile data plan (e.g. 3G/4G/LTE)	70	40%	43%	47%
No home access. I use free internet (e.g. public library, WiFi hotspot)	0	0%	1%	1%
No home access. My primary access is at my place of work	0	0%	0%	1%

5 **How important is the effective implementation of technology within instruction to your child(ren)'s success?**

Response	# of Responses	% of Responses	State %	National %
Not important	4	2%	2%	2%
Somewhat important	20	12%	13%	14%
Important	51	29%	32%	32%
Extremely important	97	56%	52%	52%
No opinion	1	1%	1%	1%

6 **When you think about your child(ren)'s future, do any of these things worry you? I worry about my child(ren)… (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Not doing as well as we have done financially	58	41%	37%	35%
Having to compete with better educated workers across the globe for jobs	69	49%	45%	46%

	Not being able to afford a home in my community	73	52%	41%	27%
	Not graduating from high school	8	6%	5%	7%
	Not getting into a good college	39	28%	29%	31%
	Having to live at our house as an adult	35	25%	19%	17%
	Having to have more than a college degree to get a good job	66	47%	55%	49%
	Not learning the skills in school needed to be successful in the future	70	50%	54%	56%
	Not knowing how to use technology in the workplace	34	24%	20%	19%
	Other	12	9%	12%	11%

7 **What do you think is the best way for your child to develop the skills they will need to be successful in the future? (Check all that apply)**

	Response	# of Responses	% of Responses	State %	National %
	Take a coding or programming class	20	14%	23%	28%
	Take advanced science or math classes	41	29%	48%	60%
	Take fully online or virtual courses	13	9%	13%	15%
	Take pre-professional or vocational classes	82	57%	43%	35%
	Take a special course to improve technology skills	59	41%	40%	40%
	Learn an additional language	51	36%	52%	62%
	Conduct scientific experiments or research projects	26	18%	34%	43%
	Keep updated on global current affairs	69	48%	49%	54%
	Pursue artistic and/or performance interests	25	17%	34%	43%
	Pursue public speaking opportunities through clubs or volunteer activities	48	34%	46%	54%
	Participate in school leadership opportunities	72	50%	59%	65%
	Work on group projects in class	59	41%	54%	55%
	Participate in a team sport or academic group	61	43%	56%	64%
	Use technology within his/her classes	115	80%	77%	75%
	Use technology outside of school to pursue academic interests	84	59%	55%	58%
	Gain work experience through a job, internship, or volunteering	130	91%	81%	78%

	Participate in after school or summer academic programs	46	32%	45%	47%
	Other	11	8%	8%	6%

8 **What concerns you most about the use of technology at your child(ren)'s school? (Check all that apply)**

	Response	# of Responses	% of Responses	State %	National %
	Students' personal information not being sufficiently protected	54	41%	43%	43%
	Students' personal school data being shared without parental permission	44	33%	36%	35%
	Class or school websites not regularly being updated with current information	61	46%	42%	42%
	Students are not learning Internet safety and digital citizenship skills at school	43	32%	40%	42%
	Technology use for learning varying too much from teacher to teacher	47	35%	33%	38%
	Teachers not knowing how to use technology tools to improve student learning	50	38%	39%	42%
	Teachers not using assessment data to understand how to help students learn	32	24%	26%	29%
	Students not having access to technology in every class	49	37%	33%	33%
	Students having to use technology that is of poor quality or out of date	55	41%	30%	36%
	Students not being allowed to use their own laptop or tablet within class	18	14%	13%	14%
	Students not being allowed to use a cellphone to call or text during the school day	5	4%	4%	6%
	Students spending too much school time preparing for online tests	22	17%	25%	21%
	Internet access is slow or limited to only a few locations at the school	33	25%	18%	21%
	School filters and firewalls not protecting students from inappropriate websites or information	50	38%	32%	32%
	Technology use is not a regular part of the school day	25	19%	17%	22%
	Other	16	12%	14%	16%

9 **Many schools are exploring how to leverage mobile devices such as laptops, and tablets to improve student achievement. What would be the benefits of incorporating such devices into instruction? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Access to online textbooks	111	79%	70%	70%
Helps teachers improve their technology skills	55	39%	39%	41%
Improves teacher-parent-student communications	89	64%	60%	59%
Increases student engagement in school and learning	87	62%	58%	57%
Increases teacher productivity	41	29%	27%	32%
Provides personalized instruction for each student	61	44%	48%	48%
Provides a way for the teacher to create a learning center environment	52	37%	37%	38%
Provides a way for students to review classroom material after school	99	71%	69%	67%
Provides a way to help students who are struggling	84	60%	53%	48%
Students develop collaboration and teamwork skills	51	36%	39%	34%
Students develop critical thinking and problem solving skills	59	42%	47%	44%
Students develop stronger communication skills	42	30%	33%	31%
Student ownership of learning	70	50%	45%	44%
These devices extend learning beyond the school day	76	54%	52%	49%
Other	6	4%	5%	7%

10 **If your child(ren)'s school allowed the use of mobile devices for educational purposes, how likely would you be to purchase one for your child(ren) to use at school?**

Response	# of Responses	% of Responses	State %	National %
Very unlikely	12	8%	12%	10%
Somewhat unlikely	13	9%	6%	6%
Neither likely nor unlikely	5	4%	6%	6%
Somewhat likely	20	14%	15%	16%
Very likely	39	27%	25%	28%

I think it is the responsibility of the school to provide technology for my child(ren) to use for educational purposes	34	24%	23%	20%
I have purchased a mobile device for my child(ren) to use at school for educational purposes	19	13%	13%	14%

11 **Imagine there are two comparable classes at your child(ren)'s school. In one class, your child(ren) could use their own mobile device in the class. In the other class, that was not allowed. How likely is it that you would want your child(ren) to be in the class where he/she could use their own mobile device?**

Response	# of Responses	% of Responses	State %	National %
Very unlikely	14	10%	13%	14%
Somewhat unlikely	14	10%	10%	9%
Neither likely nor unlikely	34	24%	26%	26%
Somewhat likely	31	22%	20%	20%
Very likely	47	34%	30%	31%

12 **Some school districts and states are requiring all students to take a fully online or virtual class to graduate from high school so that they are well prepared for online learning classes in college or on the job. Do you agree with this policy?**

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	18	13%	12%	11%
Disagree	16	12%	15%	16%
Neither agree nor disagree	36	26%	23%	22%
Agree	43	31%	35%	33%
Strongly agree	24	17%	15%	17%

13 **Have you ever taken a fully online or virtual course for your own purposes? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Yes - through my work or job	62	44%	46%	51%
Yes - on my own to learn new skills	34	24%	23%	29%
Yes - to explore a personal interest or hobby	25	18%	14%	19%
Yes - as part of college or an academic program	34	24%	28%	33%
Yes - for compliance such as online traffic school	6	4%	3%	9%
No - but I would be interested in taking an online course if it was an option for me	32	23%	22%	17%

	No - and I don't think I would be interested in taking an online course	19	13%	14%	10%

14 **How do you want your child(ren)'s teacher or school to communicate information to you? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Automated phone messages regarding academic performance	43	30%	22%	20%
Automated phone messages regarding attendance	55	39%	24%	27%
Broadcast or announcement messages to my home phone	34	24%	22%	17%
Class blogs	15	11%	15%	23%
Face-to-face meetings	84	60%	67%	64%
Hard copy flyers or newsletters that are sent home with my child(ren) or mailed to us	21	15%	23%	25%
Listserv messages or newsletters	10	7%	5%	14%
Local newspaper or public TV announcements	5	4%	3%	3%
Mobile app	40	28%	30%	30%
Parent association meetings or school board meetings	12	8%	13%	16%
Personal emails	128	91%	92%	90%
Personal phone calls	88	62%	63%	52%
School blog postings	11	8%	9%	13%
School or district Facebook account	11	8%	12%	17%
School or district informational website	37	26%	28%	33%
School portal that includes information on grades and assignments	72	51%	47%	45%
Skype or ichat for teacher-parent meetings	7	5%	7%	9%
Text message to my mobile device	68	48%	47%	48%
Use Twitter to send updates	3	2%	4%	5%
Other	1	1%	3%	3%

15 **If your child(ren)'s school was going to design a new mobile app, what features and functionality would you like it to have? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Interactive school calendar	118	85%	82%	84%

Class schedule organizer	87	63%	67%	69%
Sports schedules and scores	51	37%	36%	43%
School information (e.g. contact information, student handbook)	99	72%	74%	75%
School newsfeed	64	46%	54%	55%
Emergency alerts (e.g. school closures)	118	85%	86%	88%
Notifications (e.g. upcoming tests and due dates)	110	80%	83%	81%
Student portal to access grades and assignments	112	81%	80%	79%
Interactive forms for parents (e.g. report absences, permission slips)	100	72%	70%	72%
Parent portal (e.g. PTA information)	69	50%	54%	54%
School payment system	65	47%	49%	54%
Lunch menus	52	38%	55%	54%
Ability to connect with teachers	108	78%	79%	76%
Class group messages	47	34%	40%	46%
Tip line to report concerns (e.g. bullying, cheating)	61	44%	47%	50%
Mental health/crisis hotline	40	29%	28%	29%
Links to school social media accounts	32	23%	27%	30%
Study games or apps for students	65	47%	54%	53%
Photo gallery	36	26%	30%	28%
Book list	63	46%	46%	44%
Other	4	3%	2%	3%

16 **How often do you use these social media tools or online activities in your free time?**

Facebook

Response	# of Responses	% of Responses	State %	National %
Never	27	20%	20%	16%
Rarely	9	7%	6%	9%
Sometimes	28	21%	17%	16%
Often	39	29%	28%	30%
All of the time	33	24%	28%	28%

Instagram

Response	# of Responses	% of Responses	State %	National %
Never	85	65%	62%	62%
Rarely	22	17%	11%	12%
Sometimes	11	8%	10%	11%
Often	9	7%	11%	9%
All of the time	4	3%	6%	6%

LinkedIn

Response	# of Responses	% of Responses	State %	National %
Never	76	60%	56%	48%
Rarely	22	17%	15%	18%
Sometimes	18	14%	17%	20%
Often	10	8%	9%	10%
All of the time	1	1%	3%	4%

Pinterest

Response	# of Responses	% of Responses	State %	National %
Never	60	45%	45%	41%
Rarely	35	26%	20%	18%
Sometimes	19	14%	17%	20%
Often	12	9%	10%	13%
All of the time	6	5%	8%	8%

Snapchat

Response	# of Responses	% of Responses	State %	National %
Never	119	92%	94%	88%
Rarely	4	3%	3%	6%
Sometimes	2	2%	2%	3%
Often	3	2%	1%	1%
All of the time	1	1%	0%	1%

Tumblr

Response	# of Responses	% of Responses	State %	National %
Never	120	93%	92%	91%
Rarely	4	3%	4%	6%

Sometimes	3	2%	2%	2%
Often	1	1%	1%	1%
All of the time	1	1%	0%	0%

Twitter

Response	# of Responses	% of Responses	State %	National %
Never	89	69%	69%	63%
Rarely	19	15%	14%	15%
Sometimes	16	12%	9%	12%
Often	4	3%	6%	6%
All of the time	1	1%	2%	4%

Vine

Response	# of Responses	% of Responses	State %	National %
Never	118	91%	90%	88%
Rarely	7	5%	6%	7%
Sometimes	3	2%	4%	3%
Often	1	1%	0%	1%
All of the time	1	1%	1%	0%

YouTube

Response	# of Responses	% of Responses	State %	National %
Never	21	16%	14%	9%
Rarely	35	27%	20%	22%
Sometimes	44	34%	42%	42%
Often	21	16%	19%	20%
All of the time	7	5%	5%	7%

Social messaging apps (e.g. Facebook messenger, WhatsApp, KIK)

Response	# of Responses	% of Responses	State %	National %
Never	53	40%	39%	33%
Rarely	10	8%	8%	13%
Sometimes	29	22%	22%	21%
Often	23	18%	21%	19%
All of the time	16	12%	10%	14%

Video messaging (e.g. Skype, FaceTime)

Response	# of Responses	% of Responses	State %	National %
Never	63	50%	39%	29%
Rarely	30	24%	24%	26%
Sometimes	24	19%	25%	28%
Often	7	5%	9%	12%
All of the time	3	2%	3%	5%

Blogging sites (your own or others)

Response	# of Responses	% of Responses	State %	National %
Never	96	76%	71%	55%
Rarely	17	13%	15%	20%
Sometimes	10	8%	8%	16%
Often	1	1%	4%	7%
All of the time	3	2%	2%	3%

Stream TV/movies (e.g. Hulu, Netflix)

Response	# of Responses	% of Responses	State %	National %
Never	47	36%	33%	28%
Rarely	16	12%	14%	13%
Sometimes	34	26%	24%	21%
Often	20	15%	19%	23%
All of the time	14	11%	9%	16%

Online games/apps (e.g. Candy Crush)

Response	# of Responses	% of Responses	State %	National %
Never	42	32%	32%	36%
Rarely	18	14%	16%	18%
Sometimes	34	26%	26%	21%
Often	24	18%	16%	15%
All of the time	15	11%	10%	10%

Massively multiplayer online games (MMOG, MMORPG)

Response	# of Responses	% of Responses	State %	National %
Never	115	91%	90%	87%

Rarely	4	3%	3%	6%
Sometimes	3	2%	3%	4%
Often	2	2%	1%	2%
All of the time	2	2%	2%	1%

Special interest forums (e.g. for games)

Response	# of Responses	% of Responses	State %	National %
Never	99	79%	82%	75%
Rarely	8	6%	6%	11%
Sometimes	9	7%	6%	8%
Often	4	3%	3%	3%
All of the time	5	4%	3%	2%

17 **What concerns you the most about your child(ren)'s Internet use at school or home? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Meeting strangers online	92	66%	70%	69%
Sharing too much personal information online	106	76%	77%	79%
Websites that are inappropriate for my child(ren)'s age	80	58%	70%	75%
Plagiarism by copying and pasting online content	36	26%	28%	31%
Cyberbullying	73	52%	64%	61%
Online predators	88	63%	70%	69%
Too much time spent looking at a computer screen	88	63%	70%	71%
Cheating on tests by using mobile devices to look up information	28	20%	22%	24%
Using a mobile device to go online or play games when it is not allowed or appropriate	73	52%	50%	51%
Advertising and spam	45	32%	36%	38%
Copyright issues/illegal file sharing	22	16%	16%	18%
Difficulty evaluating the credibility of an online resource	50	36%	36%	41%
Ineffective Internet filters and firewalls	57	41%	41%	41%
Privacy of my child's records and information on the school network	61	44%	49%	49%

Violent or inappropriate video or online games	46	33%	47%	50%
I don't have any concerns	6	4%	3%	2%
Other	3	2%	3%	5%

18 **Has your child(ren)'s school or district provided you with information about how they are protecting the confidentiality of personal information that is being collected and stored digitally about your child(ren) (e.g. grades, test scores, disciplinary actions, health records, etc.)?**

Response	# of Responses	% of Responses	State %	National %
Yes	66	49%	42%	46%
No	70	51%	58%	54%

19 **If you were on a technology committee for a new school, which of these would you recommend as a good investment to enhance student achievement? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Internet access anywhere at school	82	61%	61%	57%
Ability for students to use their own mobile devices at school	61	46%	40%	40%
School provides every student with a mobile device	62	46%	41%	39%
Mobile device accessories (e.g. attachable keyboards, covers)	27	20%	20%	21%
Databases, digital books, animations, and videos to help students with schoolwork	83	62%	62%	62%
Digital games or virtual simulations	24	18%	16%	21%
Software that changes the level of difficulty and content to address student needs	91	68%	68%	66%
"Digital backpack" that helps organize schoolwork and provides access to important information (e.g. take notes, organize and view assignments)	82	61%	60%	60%
Mobile apps for learning	78	58%	60%	57%
Interactive whiteboards (e.g. Smartboard, Polyvision)	72	54%	61%	56%
Learning management systems (e.g. Blackboard)	40	30%	31%	40%
A handheld device for students to use to answer questions in class (e.g. clickers)	33	25%	21%	23%
3D printer	26	19%	15%	16%
Digital reader (e.g. Kindle, Nook)	35	26%	27%	28%

Digital media creation tools (e.g. video, audio)	29	22%	24%	26%
School mobile app	62	46%	46%	43%
Online or virtual classes	40	30%	30%	34%
Online tests and assessments	60	45%	38%	41%
Online textbooks	96	72%	62%	59%
Online tutors	72	54%	47%	49%
Social media tools for students to connect and work with others (e.g. blogs, wikis, social networking sites)	22	16%	19%	21%
Text messaging	30	22%	17%	16%
Google hangouts or other online group messaging in class	20	15%	12%	15%
Other	6	4%	4%	5%

20 **How much do you agree with this statement: As a result of using technology to help with schoolwork, my child(ren) is...**

Collaborating with other students more

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	7	5%	6%	9%
Disagree	17	13%	17%	18%
Neither agree nor disagree	75	56%	49%	42%
Agree	32	24%	25%	26%
Strongly agree	4	3%	3%	5%

Communicating with his/her teacher more often

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	4	3%	5%	8%
Disagree	24	18%	17%	18%
Neither agree nor disagree	58	43%	40%	37%
Agree	40	30%	31%	30%
Strongly agree	8	6%	7%	7%

Participating more in class discussions

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	7	5%	6%	8%
Disagree	18	14%	15%	18%

Neither agree nor disagree	64	48%	51%	48%
Agree	38	29%	25%	21%
Strongly agree	5	4%	4%	5%

Developing critical thinking and problem solving skills

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	6	5%	4%	6%
Disagree	10	8%	10%	12%
Neither agree nor disagree	53	41%	35%	36%
Agree	54	42%	43%	38%
Strongly agree	7	5%	7%	8%

Developing creativity skills

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	6	5%	5%	7%
Disagree	11	8%	13%	12%
Neither agree nor disagree	56	42%	35%	33%
Agree	49	37%	40%	39%
Strongly agree	10	8%	7%	9%

Gaining a better understanding of the class materials

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	6	5%	4%	5%
Disagree	5	4%	7%	10%
Neither agree nor disagree	53	40%	38%	36%
Agree	59	45%	45%	40%
Strongly agree	8	6%	6%	8%

Spending more time mastering a skill or learning something

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	7	5%	4%	6%
Disagree	14	11%	11%	13%
Neither agree nor disagree	58	44%	40%	39%
Agree	43	33%	38%	34%
Strongly agree	10	8%	7%	8%

Learning at his/her own pace

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	6	5%	4%	5%
Disagree	10	8%	8%	11%
Neither agree nor disagree	48	36%	36%	35%
Agree	58	44%	43%	39%
Strongly agree	10	8%	8%	10%

In control over his/her learning

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	7	5%	5%	6%
Disagree	9	7%	12%	13%
Neither agree nor disagree	55	43%	42%	37%
Agree	49	38%	35%	35%
Strongly agree	8	6%	6%	9%

Learning in a way that better fits his/her learning style

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	6	5%	5%	7%
Disagree	8	6%	10%	12%
Neither agree nor disagree	47	36%	36%	38%
Agree	57	44%	41%	34%
Strongly agree	11	9%	8%	10%

More interested in what he/she is learning in class

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	6	5%	5%	6%
Disagree	10	8%	12%	11%
Neither agree nor disagree	55	42%	34%	37%
Agree	48	36%	41%	36%
Strongly agree	13	10%	8%	10%

Doing better on tests

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	7	5%	5%	7%

Disagree	11	8%	14%	13%
Neither agree nor disagree	64	49%	48%	49%
Agree	40	31%	28%	24%
Strongly agree	8	6%	6%	7%

More likely to complete homework assignments

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	6	5%	5%	7%
Disagree	10	8%	14%	12%
Neither agree nor disagree	41	32%	31%	36%
Agree	59	45%	40%	35%
Strongly agree	14	11%	9%	10%

Using time at home for extended learning

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	10	8%	7%	8%
Disagree	15	11%	15%	14%
Neither agree nor disagree	56	42%	34%	33%
Agree	44	33%	38%	36%
Strongly agree	7	5%	6%	10%

22 **Is your child(ren) involved in any of these school-sponsored activities or programs? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Apprenticeship Programs	8	6%	2%	2%
AVID (Advancement Via Individual Determination)	1	1%	0%	2%
Computer program club (coding)	1	1%	1%	3%
Future Teacher Academies	0	0%	0%	1%
Gear UP	1	1%	0%	1%
IB (International Baccalaureate)	0	0%	0%	2%
JROTC (Junior Reserve Officer Training Corps)	0	0%	0%	1%
MUN (Model United Nations) or Model Congress	0	0%	0%	1%
School Video Production Team	3	2%	3%	2%

STEM (Science, Technology, Engineering, and Mathematics) Academies	5	4%	13%	10%
Student Government	4	3%	6%	8%
Student Tech Support Team	2	2%	2%	1%
Talent Search	1	1%	1%	2%
Visual and Performing Arts Academies	2	2%	5%	7%
None of the above	105	84%	75%	71%

23 **Are you a..**

Response	# of Responses	% of Responses	State %	National %
Mom	109	81%	80%	78%
Dad	19	14%	17%	20%
Grandparent	5	4%	2%	1%
Other relative or guardian	1	1%	1%	1%

24 **Gender**

Response	# of Responses	% of Responses	State %	National %
Female	115	86%	83%	79%
Male	19	14%	17%	20%

25 **Age**

Response	# of Responses	% of Responses	State %	National %
Under 29	0	0%	1%	3%
30-39	25	19%	29%	30%
40-49	69	51%	49%	50%
50-59	35	26%	18%	16%
60-69	3	2%	2%	1%
70 +	2	1%	1%	0%

26 **Race or Cultural Identity**

Response	# of Responses	% of Responses	State %	National %
American Indian/Alaskan Native	1	1%	1%	1%
Asian	1	1%	3%	5%
Black/African-American	2	1%	5%	5%
Caucasian/White (non-Hispanic)	114	84%	76%	73%

Hispanic/Latino	8	6%	8%	8%
Native Hawaiian/Other Pacific Islander	0	0%	0%	1%
Decline to state	9	7%	8%	8%
Other	3	2%	2%	2%

27 **Highest level of educational attainment**

Response	# of Responses	% of Responses	State %	National %
Less than high school diploma	1	1%	0%	1%
High school diploma	36	27%	14%	6%
Some College	49	37%	29%	21%
Bachelor's degree	21	16%	29%	37%
Graduate Education (e.g. Masters, Doctorate, etc.)	26	20%	28%	35%

28 **Household Income**

Response	# of Responses	% of Responses	State %	National %
Less than $15,000	2	2%	2%	2%
$15,000 - $24,999	7	6%	2%	3%
$25,000-$49,999	19	16%	12%	10%
$50,000 - $74,999	25	21%	20%	14%
$75,000 - $99,999	25	21%	21%	16%
$100,000 - $149,999	32	27%	27%	26%
$150,000-$200,000	8	7%	13%	15%
Over $200,000	1	1%	2%	14%

Appendix K: Speak UP Administrator Survey

2019 Speak Up Survey

Speak Up 2019

School Site Administrator

District: Connecticut Technical Education and Career System

Results based on 17 survey(s).
Note: Survey responses are based upon the number of individuals that responded to the specific question.

1 **What is your primary job assignment this year?**

Response	# of Responses	% of Responses	State %	National %
Principal, Headmaster, or Executive Director	6	35%	38%	43%
Assistant Principal	7	41%	31%	33%
Guidance, Career, or Admissions Counselor	1	6%	10%	11%
Curriculum and Instruction Specialists, and Coaches	0	0%	3%	5%
School Psychologist	1	6%	3%	1%
Special Education Coordinator	0	0%	0%	0%
Student Services and Support Specialist	1	6%	3%	1%
Administrative or Support Staff	0	0%	3%	2%
Other	1	6%	7%	4%

2 **What type of school are you currently assigned to? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Elementary School	0	0%	10%	48%
Middle School or Junior High School	0	0%	21%	24%

	High School	14	82%	65%	28%
	Alternative School	0	0%	0%	2%
	Virtual or online school	0	0%	0%	1%
	Other	4	24%	14%	5%

3 **As a school leader you are faced with many challenges. Which of the following qualify as your top challenges- the ones most likely to "wake you up" in the middle of the night? (Check all that apply)**

	Response	# of Responses	% of Responses	State %	National %
	Adequate funding	5	29%	27%	36%
	Adequate school facilities	4	24%	13%	15%
	Educational equity	1	6%	10%	17%
	School safety	7	41%	23%	31%
	Closing the achievement gap	7	41%	37%	51%
	Serving diverse student populations	2	12%	17%	34%
	High school graduation rates	0	0%	0%	12%
	Incorporation of college and career ready skill development into curriculum	7	41%	30%	19%
	School public image in the community	1	6%	17%	20%
	Communications with parents	5	29%	40%	29%
	Adequate technology	5	29%	27%	25%
	Use of technology within instruction	6	35%	27%	28%
	Achievement measured by standardized test scores	5	29%	33%	34%
	Using data to assess student achievement	5	29%	37%	33%
	Using student data to evaluate teacher performance	4	24%	30%	23%
	Adherence to curriculum standards (e.g. state, national, provincial)	2	12%	20%	12%
	Implementation of state standards (e.g. Common Core State Standards)	5	29%	30%	21%
	Preparing for online assessments	4	24%	17%	17%
	Special education issues and legal compliance	1	6%	27%	29%
	Legislative mandates	1	6%	10%	17%

Recruitment and retention of highly qualified teachers	3	18%	20%	24%
Staff morale/motivation	5	29%	43%	46%
Students' behavior/attendance issues	6	35%	40%	44%
Students' health including substance abuse, teen pregnancy, family issues	2	12%	13%	17%
Other	1	6%	13%	5%

4 **How important is the effective implementation of instructional technology to your school's core mission?**

Response	# of Responses	% of Responses	State %	National %
Not important	0	0%	0%	0%
Somewhat important	2	12%	7%	7%
Important	5	29%	27%	31%
Extremely important	10	59%	67%	61%
No opinion	0	0%	0%	0%

5 **Which of these currently popular approaches to digital learning have you implemented at your school with positive results? (It's okay if you are not familiar with all of these trends!) (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Augmented reality or other simulated environments	0	0%	7%	5%
Blended learning	5	29%	27%	28%
Digital content (e.g. videos, simulations and animations)	9	53%	73%	69%
Digital media tools for student content creation	7	41%	53%	51%
Digital or online textbooks	10	59%	63%	47%
Educational games	4	24%	40%	70%
Flipped learning	5	29%	30%	28%
Incorporating student owned devices into instruction	12	71%	67%	28%
Intelligent adaptive software	2	12%	17%	11%
Mobile apps	7	41%	40%	38%
One-to-one program (every student has a computing device)	2	12%	33%	24%

	Online assessments	12	71%	70%	68%
	Online classes for students	4	24%	17%	26%
	Online professional development for teachers	7	41%	60%	45%
	Online professional learning communities for teachers and administrators	0	0%	20%	24%
	Social media use within education	7	41%	43%	36%
	Tablets and other mobile devices	8	47%	67%	58%
	Teacher created content	9	53%	60%	51%
	Using student data to inform instruction	9	53%	73%	70%

6 **Specific to the use of technology within instruction, besides funding, which of the following are the most challenging for you and your school right now? (Check all that apply)**

	Response	# of Responses	% of Responses	State %	National %
	Creating a technology vision for our school	3	18%	12%	23%
	Protecting privacy and confidentiality of student records and information	1	6%	4%	11%
	Developing acceptable/responsible use policies for students and teachers	2	12%	12%	16%
	Developing mobile device and social media policies	3	18%	16%	18%
	Evaluating emerging technologies for classroom use	3	18%	28%	37%
	Determining between tablets, laptops, and Chromebooks for student use	3	18%	28%	19%
	Incorporating student owned mobile devices into instruction	3	18%	28%	25%
	Incorporating student owned mobile devices into the network	1	6%	4%	15%
	Evaluating quality of digital content or online courses	0	0%	12%	20%
	Providing online courses for students	4	24%	32%	11%
	Assessment of students' technology skills	1	6%	8%	19%
	Availability of technology for students' use at school	7	41%	36%	41%
	Digital equity issues (student access to technology and Internet at home)	5	29%	36%	39%

	Internet capacity and bandwidth to accommodate multi-media and digital content	7	41%	36%	31%
	Speed and accessibility of the school/district network	6	35%	32%	32%
	School or district filters or firewalls	5	29%	24%	24%
	Technology support	7	41%	44%	35%
	Motivating teachers to change their teaching practice to use technology in their classrooms	9	53%	56%	51%
	Finding teachers skilled in using technology within instruction	7	41%	40%	32%
	Staff professional development	2	12%	24%	42%
	Communication tools for connecting with parents	1	6%	8%	17%
	Using social media effectively	4	24%	24%	24%
	Student safety online	5	29%	36%	31%
	Preparing for online assessments	5	29%	24%	26%
	State or federal legislation that gets in the way of our plans	0	0%	4%	7%
	Other	0	0%	0%	3%

7 **How do you use technology to assist you with professional tasks? (Check all that apply)**

	Response	# of Responses	% of Responses	State %	National %
	Share information with other administrators and staff via district portal	9	53%	60%	68%
	Read articles and books using a digital reader or tablet	8	47%	52%	62%
	Use mobile apps for professional tasks	8	47%	52%	54%
	Use Internet-based services (e.g. Google drive, Dropbox)	11	65%	76%	84%
	Create presentations	14	82%	88%	82%
	Use tablets and video capabilities during classroom observations	6	35%	36%	46%
	Use text messaging as a way of communicating with colleagues	11	65%	76%	73%
	Use text messaging as a way of communicating with parents	3	18%	20%	28%

Use email to communicate with my staff, parents, and students	16	94%	96%	93%
Participate in webinars or video conferences	12	71%	76%	71%
Use Twitter as an informal professional development tool	3	18%	20%	25%
Update my profile on a social networking site (e.g. LinkedIn or Facebook)	4	24%	32%	31%
Learn how to do something from an online video	4	24%	44%	57%
Create and post videos about school information	3	18%	24%	25%

8 **How would you rate your technology skills?**

Response	# of Responses	% of Responses	State %	National %
Advanced - My skills are more advanced than most adults I know	5	31%	33%	31%
Average - My skills are similar to those of the adults I know	11	69%	67%	66%
Beginner - I'm just learning to use technology tools	0	0%	0%	3%

9 **Which of these mobile devices do you have for your own use? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
A phone with no Internet	2	12%	8%	9%
A Smartphone with Internet (e.g. iPhone, Samsung Galaxy)	16	94%	96%	94%
Laptop	14	82%	84%	90%
2-in-1 laptop (a laptop that can turn into a tablet)	1	6%	24%	11%
A web-based laptop (e.g. Chromebook)	0	0%	0%	11%
Tablet (e.g. iPad)	14	82%	88%	77%
Digital reader (e.g. Kindle, Nook)	3	18%	32%	34%

10 **Many schools are exploring how to leverage mobile devices such as laptops, and tablets to improve student achievement. What would be the benefits of incorporating such devices into instruction? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Access to online textbooks	16	94%	88%	75%

Helps teachers improve their technology skills	11	65%	64%	65%
Improves teacher-parent-student communications	14	82%	84%	62%
Increases student engagement in school and learning	11	65%	76%	87%
Increases teacher productivity	10	59%	68%	51%
Provides personalized instruction for each student	15	88%	88%	69%
Provides a way to create a learning centered environment	10	59%	64%	65%
Provides a way for students to review classroom material after school	13	76%	80%	64%
Provides opportunities for informal remediation	9	53%	60%	64%
Students develop collaboration and teamwork skills	9	53%	64%	58%
Students develop critical thinking and problem solving skills	10	59%	68%	64%
Students develop stronger communication skills	7	41%	48%	48%
Student ownership of learning	12	71%	76%	68%
These devices help to extend learning beyond the school day	14	82%	88%	67%
Other	0	0%	0%	1%

11 **How important do you think it is for every student to be able to use a mobile device like a laptop, tablet, or Chromebook during the school day to support schoolwork?**

Response	# of Responses	% of Responses	State %	National %
Very unimportant	3	20%	13%	8%
Unimportant	0	0%	0%	1%
Neither important nor unimportant	0	0%	4%	5%
Important	8	53%	48%	39%
Very important	4	27%	35%	47%

12 **How likely are you this year to allow students to use their own mobile devices for instructional purposes at school?**

Response	# of Responses	% of Responses	State %	National %

Very unlikely	2	12%	12%	25%
Somewhat unlikely	1	6%	8%	12%
Neither likely nor unlikely	2	12%	8%	11%
Somewhat likely	1	6%	4%	14%
Very likely	1	6%	17%	15%
We currently allow students to use their own mobile devices for instructional purposes at school	9	56%	50%	24%

13 **What prevents you from allowing your students to use their own devices at school? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Ability to provide network connectivity	7	47%	30%	30%
Absence of best practices and role models	2	13%	13%	17%
Challenges associated with the variety of hardware and software products	1	7%	13%	21%
Concerns about network security	2	13%	13%	34%
Concerns about theft of the devices at school	4	27%	17%	41%
Concerns that students will cheat using the devices	3	20%	17%	18%
Current district policies about using cell phones in school	1	7%	4%	28%
Devices could be a distraction from the core learning process	3	20%	22%	29%
Digital equity issues (e.g. student access to technology and Internet at home)	5	33%	26%	33%
Implementing effective acceptable use policies	3	20%	13%	17%
Internet safety concerns and district liabilities	1	7%	9%	29%
Lack of specific curriculum to support the devices	0	0%	4%	20%
Policies on software licenses and usage	1	7%	9%	12%
Teachers are not trained in how to use mobile devices within learning	3	20%	22%	29%

	We currently allow students to use their mobile devices for instructional purposes in our school/district	10	67%	61%	25%
	Other	1	7%	13%	12%

14 **If you were going to design the ideal mobile app for your school, what types of features or functionality would you like your mobile app have? (Check all that apply)**

	Response	# of Responses	% of Responses	State %	National %
	Interactive school calendar	14	87%	92%	83%
	Class schedule organizer for students	12	75%	71%	68%
	Sports schedules and scores	12	75%	62%	41%
	School information (e.g. contact information, policy book)	11	69%	79%	81%
	School newsfeed	8	50%	62%	68%
	Emergency alerts (e.g. school closures)	15	94%	96%	85%
	Notifications (e.g. upcoming meetings)	13	81%	87%	81%
	Student portal to access grades and assignments	12	75%	75%	75%
	Interactive forms for parents (e.g. report absences, permission slips)	10	62%	71%	72%
	Parent portal (e.g. PTA information)	9	56%	67%	71%
	School payment system	9	56%	58%	56%
	Lunch menus	9	56%	67%	64%
	Ability for teachers to communicate with students and their parents	14	87%	87%	80%
	Group messaging feature for students to use for their class(es)	8	50%	46%	55%
	Tip line for students to report concerns (e.g. bullying, cheating)	10	62%	58%	63%
	Mental health/crisis hotline	9	56%	50%	50%
	Links to school social media accounts	8	50%	50%	42%
	Study games or apps for students	8	50%	58%	67%
	Photo gallery	6	37%	29%	37%
	Book list for students	8	50%	54%	56%
	Other	0	0%	0%	3%

15 **Some school districts and states are requiring all students to take a fully online or virtual class to graduate from high school so that they are well prepared for online learning classes in college or on the job. Do you agree with this policy?**

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	0	0%	0%	6%
Disagree	2	12%	12%	11%
Neither agree nor disagree	7	44%	46%	29%
Agree	5	31%	25%	33%
Strongly agree	2	12%	17%	20%
This is already a requirement for our students	0	0%	0%	2%

16 **In what subjects are you currently offering fully online or virtual classes for your students? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Career Technical Education classes	1	8%	5%	9%
Computer Science/Programming	1	8%	5%	7%
Digital media production	0	0%	0%	5%
English/Language Arts	2	15%	11%	21%
Health	2	15%	11%	11%
Journalism or Yearbook	0	0%	0%	3%
Math	4	31%	21%	23%
Physical Education	0	0%	0%	6%
Science	3	23%	16%	19%
Social Studies/History	2	15%	11%	20%
Visual or performing arts (e.g. Art, Music, Drama)	0	0%	0%	6%
World or foreign languages	1	8%	5%	15%
We are not offering online classes for students at this time	7	54%	68%	67%

17 **One model of online learning is called blended learning. Blended learning is when a student learns part of the time in a supervised brick-and-mortar school location and the rest of the time the curriculum is delivered online with some element of student control over time, place, path, and/or pace. Which types of students do you think would benefit the most from this type of a learning experience?**

Response	# of Responses	% of Responses	State %	National %

Students with strong academic achievement	11	85%	79%	74%
Students interested in taking advanced coursework	12	92%	84%	71%
Students with discipline or behavioral issues	6	46%	47%	41%
Students with learning challenges	4	31%	37%	39%
Homeschooled students	5	38%	42%	45%
Students at risk of dropping out of school	4	31%	37%	50%
Students who previously were unsuccessful in fully online courses	6	46%	37%	35%
Students who have a track record of independent learning success	8	62%	63%	67%
Students with professional commitments outside of school (e.g. actors, athletes)	5	38%	37%	50%
Students with strong family supports	6	46%	53%	59%
Students who have a history of frequent family moves (e.g. military dependents)	2	15%	21%	38%
Other	0	0%	11%	5%

18 **What would be the most important benefits of offering online learning (virtual or blended) to your students? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Eliminate costs associated with textbooks	8	67%	44%	39%
Increase graduation rates	2	17%	22%	34%
Increase student participation in AP courses	5	42%	39%	24%
Keep students engaged in school	5	42%	50%	70%
Motivate teachers to change teaching methods	6	50%	44%	42%
Offer academic remediation to students	6	50%	56%	62%
Offer afterschool enrichment programs	6	50%	56%	51%
Offer dual-enrollment courses to students	4	33%	44%	40%
Offer instruction for homebound students (e.g. illness, health, or behavioral reasons)	8	67%	67%	57%
Offer scheduling alternatives for students	2	17%	22%	49%
Provide advanced coursework	7	58%	61%	47%
Provide classes in "hard-to-staff" areas	5	42%	44%	44%
Provide electives to students	8	67%	67%	40%

Provide more personalized instruction to students	3	25%	39%	47%
Provide programs for at-risk students	4	33%	33%	56%
Provide programs for gifted students	5	42%	44%	59%
Provide remediation services to students (including credit recovery)	6	50%	56%	50%
Provide for competency or mastery based advancement	3	25%	28%	31%
Reduce overall costs associated with instruction	1	8%	6%	22%
None of the above	0	0%	0%	3%
Other	0	0%	6%	2%

19 **In some schools teachers assign videos of lectures or lessons for students to watch as homework. Then they utilize the classroom time period for more in-depth class discussions, projects, experiments, or to provide personalized coaching to individual students. Some call this "flipped learning." What are your thoughts or experiences with this new classroom model? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Some of our teachers are doing this with videos they have found online	7	58%	56%	32%
Some of our teachers are doing this using videos they created of their own lessons or lectures	5	42%	39%	29%
Some of our teachers tried this last year but it did not work for them	0	0%	0%	4%
I am concerned that our students would not be able to access the videos at home	6	50%	44%	47%
To do this our teachers would need instruction in how to make the videos	2	17%	33%	36%
To do this our teachers would need instruction on how to find high quality videos online	3	25%	39%	31%
To do this our teachers would need instruction on how to best utilize the classroom time	3	25%	33%	33%
We are encouraging teachers to implement this model this year	2	17%	17%	12%
We are providing specific training for our teachers on this model	0	0%	0%	7%

I have heard about this but I am not interested	0	0%	0%	5%
I have never heard of this before	0	0%	0%	7%
Other	1	8%	6%	8%

20 **Many schools are evaluating how to effectively leverage digital content within instruction. What would be the primary benefits of using more digital content in your classrooms? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Cost savings	3	25%	22%	31%
Decreases dependence on textbook publishers	6	50%	39%	46%
Differentiates our school (district) as innovative in the use of technology	5	42%	50%	52%
Helps to extend learning beyond the school day	7	58%	67%	67%
Improves quality of instructional materials	4	33%	28%	54%
Improves teacher productivity	2	17%	22%	35%
Improves teacher skills with technology	3	25%	28%	53%
Increases relevancy of the instructional materials	4	33%	44%	56%
Increases student engagement in school and learning	7	58%	67%	76%
Increases teacher buy-in if the content is teacher created	0	0%	0%	25%
Makes use of the technology that we have in the classrooms or media labs	0	0%	17%	42%
Provides a way for instruction to be personalized for each student	7	58%	67%	51%
Other	0	0%	0%	1%

21 **What challenges does your school face in implementing digital content within instruction? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Balancing instructional time constraints with time to use the digital content effectively	3	23%	22%	50%
Concerns about student online safety when accessing Internet-based content	3	23%	22%	31%

Determining ownership of teacher-created content	0	0%	0%	10%
Evaluating the quality of the digital content	3	23%	39%	47%
Lack of clarity on legal use policies around digital content	0	0%	0%	16%
Locating appropriate free digital content aligned to our curriculum	5	38%	39%	42%
Managing student and teacher subscription-based content in and out of school	1	8%	11%	21%
Our teachers are not trained on how to incorporate digital content effectively	6	46%	39%	35%
Providing enough computers/devices with Internet access for students to use digital content	11	85%	78%	57%
Providing enough Internet bandwidth to fully leverage digital content	10	77%	61%	42%
Teachers are reluctant to incorporate digital content into existing lessons	2	15%	17%	24%
Understanding role of digital content within state standards	1	8%	11%	27%
We do not have a school vision for the use of digital content within instruction	2	15%	11%	12%

22 **Which of these factors would you consider most important when evaluating the quality of digital content to use in your school? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Content is free	8	62%	61%	46%
Content is fee-based	1	8%	6%	10%
No commercial advertisements within the content	4	31%	33%	52%
Includes embedded assessments	7	54%	44%	45%
Research based	10	77%	78%	79%
Teacher evaluation of the materials	5	38%	50%	57%
Student achievement with the materials	5	38%	39%	58%
It can be modified by the teacher	6	46%	44%	57%
There is a mobile app version of the content	3	23%	22%	25%
Learned about it on a webinar or virtual conference	1	8%	6%	11%

Learned about the resource through a demonstration at a conference	2	15%	11%	12%
Recommended on education blogs and websites	1	8%	17%	21%
Textbook publisher recommendations	1	8%	6%	9%
Referred by a colleague	2	15%	22%	23%
Materials are created by practicing teachers	7	54%	50%	36%
Certified by education membership associations and organizations	5	38%	39%	26%
Compiled on a list by our State Department of Education or Ministry of Education	3	23%	22%	22%
Source is a content expert organization (e.g. National Science Foundation, universities)	3	23%	22%	35%
Source is an established media or content producer (e.g. NBC, Discovery, PBS)	2	15%	22%	24%
Source is an online curriculum company or organization	1	8%	6%	12%
Other	0	0%	0%	2%

23 **An emerging trend in educational software is called intelligent adaptive learning. This kind of software dynamically adapts the learning path for each student based upon demonstrated comprehension and sophistication of strategy, and provides real time reporting to teachers and administrators. Which of the following aspects of this new trend would be most important for your school? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Engages students in self-directed independent learning	10	83%	76%	77%
Increases the effectiveness of our teachers through the use of technology	7	58%	53%	53%
Provides a way to differentiate instruction with larger class sizes	11	92%	94%	75%
Provides instruction at the "just right" level for each individual student	9	75%	82%	74%
Real time reporting on student comprehension by concept back to the teacher	7	58%	71%	69%
Real time reporting on student progress against standards for administrators	6	50%	59%	56%

This does not sound like something that would be valuable for our district	0	0%	0%	4%
Other	0	0%	0%	1%

24 **What is your level of agreement? The majority of the teachers at my school know how to use formative assessment data about students' strengths and weaknesses to tailor instruction and lessons to meet individual student needs.**

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	1	8%	6%	2%
Disagree	2	17%	12%	11%
Neither agree nor disagree	2	17%	12%	15%
Agree	7	58%	71%	58%
Strongly agree	0	0%	0%	14%

25 **There is a lot of discussion about how to adequately prepare pre-service teachers for the demands of teaching and using technology within a 21st century classroom. What technology experiences should pre-service teachers have had upon completion of their certification process? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Ability to create and use video, podcasts, and other media	9	82%	81%	68%
Experience as a student in an online class	7	64%	56%	47%
Experience teaching an online class	4	36%	31%	28%
Know how to develop, implement, and evaluate online assessments	6	55%	62%	66%
Know how to effectively use technology to communicate with parents and students	10	91%	94%	80%
Know how to incorporate adaptive learning software into their instruction	7	64%	56%	57%
Know how to incorporate social media tools or applications into instruction	6	55%	62%	44%
Know how to incorporate students' mobile devices into instruction	7	64%	62%	47%
Know how to locate and use digital content and e-textbooks within instruction	5	45%	62%	64%
Know how to locate and use electronic teaching aids and productivity tools	7	64%	69%	63%
Know how to set up a blended learning class model	9	82%	81%	51%

Know how to set up a flipped learning class model	5	45%	56%	46%
Know how to use technology to create authentic learning experiences for students	7	64%	75%	75%
Know how to use technology to facilitate student collaboration	8	73%	81%	70%
Know how to use virtual or online games to teach	3	27%	31%	41%
Participate in an online professional learning community	5	45%	44%	46%
Use technology to differentiate instruction	8	73%	75%	69%
Other	0	0%	0%	1%

26 **Do you agree with this statement? It is the responsibility of school site administrators to ensure that electronic data collected about students (both learning data and personal data) is safely protected, and used appropriately by teachers and staff with no potential for confidentiality breaches or invasions of privacy.**

Response	# of Responses	% of Responses	State %	National %
Strongly disagree	0	0%	0%	4%
Disagree	1	8%	12%	8%
Neither agree nor disagree	4	33%	24%	14%
Agree	5	42%	41%	40%
Strongly agree	2	17%	24%	33%

27 **Which of these methods do you think are most effective for communications with parents today? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Automated phone messages about student's academic performance	5	42%	29%	34%
Automated phone messages about student's attendance	7	58%	47%	56%
Broadcast or announcement messages to student's home	7	58%	59%	44%
Class blogs	0	0%	18%	20%
Face-to-face meetings	11	92%	88%	83%
Hard copy flyers or newsletters that are sent home with the student or mailed to their home	5	42%	41%	31%

Listserv messages or newsletters	0	0%	18%	19%
Local newspaper or public TV announcements	2	17%	18%	14%
Mobile app	3	25%	35%	35%
Parent association meetings or school board meetings	4	33%	35%	26%
Personal emails	9	75%	76%	82%
Personal phone calls	12	100%	100%	84%
School blog postings	1	8%	12%	16%
School or district Facebook account	1	8%	24%	36%
School portal that includes information on grades and assignments	7	58%	65%	55%
School or district informational website	7	58%	65%	52%
Skype, iChat, or Google hangouts for teacher-parent meetings	0	0%	6%	8%
Text message to parent mobile device	5	42%	41%	50%
Use Twitter to send updates	2	17%	24%	21%
Other	0	0%	0%	1%

28 **Imagine you are designing a dream school for 21st century learners. Which of these tools or strategies do you think holds the greatest potential for increasing student achievement and success? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
Internet access anywhere at school	11	92%	94%	83%
Ability for students to use their own mobile devices at school	7	58%	65%	52%
Mobile device accessories (e.g. attachable keyboards, covers)	5	42%	41%	34%
School provides every student with a mobile device	7	58%	53%	58%
Databases, digital books, animations, and videos to help students with schoolwork	8	67%	65%	65%
Digital games or virtual simulations	5	42%	41%	44%
Software that changes the level of difficulty and content to address student needs	10	83%	71%	73%
"Digital backpack" that helps organize schoolwork and provides access to	5	42%	47%	58%

	important information (e.g. take notes, organize, and view assignments)				
	Mobile apps for learning	6	50%	53%	54%
	Interactive whiteboards (e.g. Smartboard, Polyvision)	10	83%	76%	62%
	Learning management systems (e.g. Blackboard)	5	42%	41%	42%
	A handheld device for students to use to answer questions in class (e.g. clickers)	6	50%	47%	42%
	3D printer	4	33%	35%	23%
	Digital reader (e.g. Kindle, Nook)	3	25%	35%	31%
	Digital media creation tools (e.g. video, audio)	6	50%	53%	39%
	School mobile app	6	50%	53%	38%
	Online or virtual classes	7	58%	65%	41%
	Online tests and assessments	10	83%	76%	60%
	Online textbooks	8	67%	65%	60%
	Online tutors	6	50%	53%	48%
	Social media tools for students to connect and work with others (e.g. blogs, wikis, social networking sites)	3	25%	24%	36%
	Text messaging	2	17%	18%	28%
	Google hangouts or other online group messaging in class	5	42%	47%	29%
	Other	0	0%	0%	2%

30 **Gender**

Response	# of Responses	% of Responses	State %	National %
Female	8	67%	69%	66%
Male	4	33%	31%	34%

31 **At the end of this school year, how many years of leadership/administrative experience will you have?**

Response	# of Responses	% of Responses	State %	National %
This is my first year	0	0%	6%	6%
1 to 3	2	15%	11%	17%
4 to 10	2	15%	17%	39%

11 to 15	5	38%	39%	18%
16+	4	31%	28%	20%

32 **Race or Cultural Identity**

Response	# of Responses	% of Responses	State %	National %
American Indian/Alaskan Native	0	0%	0%	2%
Asian	0	0%	0%	1%
Black/African-American	0	0%	0%	9%
Caucasian/White (non-Hispanic)	10	77%	83%	73%
Hispanic/Latino	3	23%	17%	9%
Native Hawaiian/Other Pacific Islander	0	0%	0%	1%
Decline to state	1	8%	6%	5%
Other	0	0%	0%	1%

33 **Highest level of educational attainment**

Response	# of Responses	% of Responses	State %	National %
Bachelor's degree	0	0%	0%	3%
Master's degree in education	3	25%	24%	65%
Master's degree other than education	3	25%	18%	14%
Doctorate degree (Ed.D., Ph.D.)	2	17%	18%	9%
Other	4	33%	41%	9%

34 **Are you a member of any of these education professional associations or their state affiliates? (Check all that apply)**

Response	# of Responses	% of Responses	State %	National %
AASA	0	0%	0%	4%
ASCD	4	36%	50%	28%
CoSN	0	0%	0%	0%
ISTE	0	0%	0%	5%
NAESP	0	0%	0%	13%
NAMSP	0	0%	0%	1%
NASSP	1	9%	6%	13%
PDK International	0	0%	0%	5%
None of the above	6	55%	44%	53%

Appendix L: Future Ready Schools CTECS Readiness Report

FUTURE READY SCHOOLS
PREPARING STUDENTS FOR SUCCESS

DIGITAL LEARNING READINESS REPORT

Date of Report: 1/5/15

Connecticut Technical High School System

Digital Learning Readiness Score: 7 *(of 10)*

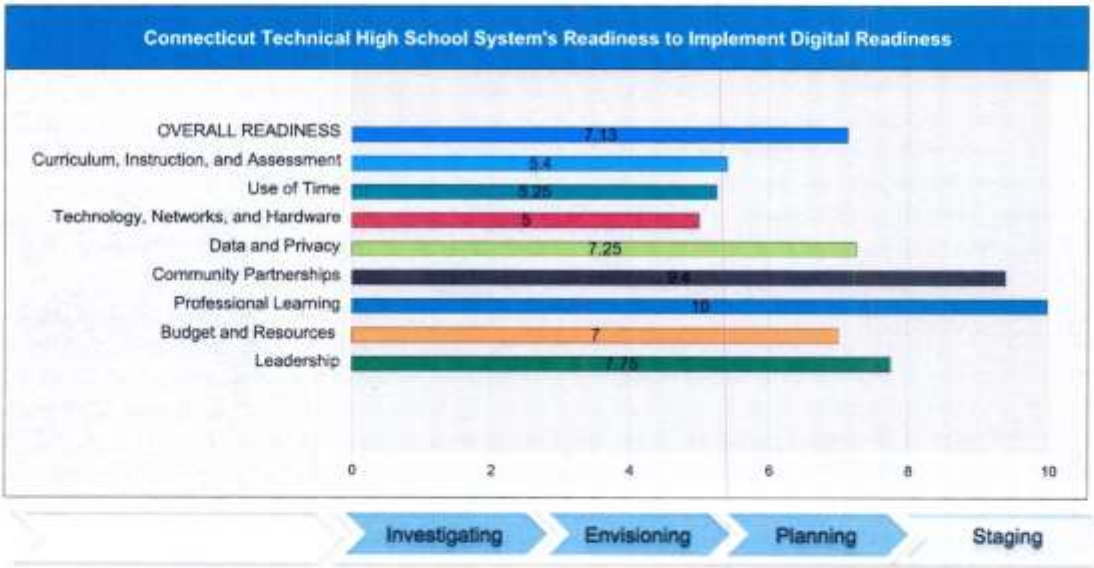
Technology now allows for personalized digital learning for every student in the nation. The Future Ready District Pledge, according to the U.S. Department of Education, is designed to set out a roadmap to achieve that success and to commit districts to move as quickly as possible towards a shared vision of preparing students for success in college, careers and citizenship. This roadmap can only be accomplished through a systemic approach to change, as outlined in the graphic below.

With student learning at the center, a district must align each of the seven (7) key categories, or gears, in order to advance toward successful digital learning:

1. Curriculum, Instruction, and Assessment
2. Use of Time
3. Technology, Networks, and Hardware
4. Data and Privacy
5. Community Partnerships
6. Professional Learning
7. Budget and Resources

The outside rings in the figure emphasize the importance of empowered leadership and the cycle of transformation where districts vision, plan, implement and assess continually. Once a district is strategically staged in each gear, district leaders can be confident that they are ready for a highly successful implementation phase that leads to innovation through digital learning.

This confidential report indicates your district's readiness to implement digital learning. The chart below provides a snapshot of your district's progress to date across the seven gears in the Future Ready framework.



Digital Learning

Digital learning is defined as the strengthening, broadening, and/or deepening of students' learning through the effective use of technology. It individualizes and personalizes learning to ensure all students reach their full potential to succeed in college and a career.

Digital learning is the strengthening, broadening, and/or deepening of students' learning through the effective use of technology.

Digital learning can be enabled through a range of instructional practices. Much more than "online learning," digital learning encompasses a wide spectrum of tools and practices. It emphasizes high-quality instruction and provides access to challenging content, feedback through formative assessment, and opportunities for learning anytime and anywhere.

Staging your district to implement digital learning successfully is a complex progress. It will include: 1) investigating and researching new designs for learning, 2) envisioning a range of possibilities and formally adopting a new vision, 3) collaboratively developing plans to enable that vision, and 4) staging the implementation for success by enacting policies and capacity building measures. The following provides important information about the foundation your district is establishing in support of digital learning.

Your District's Vision for Digital Learning

District Vision	Vision for Students	Included in Your District's Vision:	
		Yes	No
Students are able to learn anytime, anywhere over multiple mediums.	• Personalization of learning	√	
	• Student-centered learning		√
	• 21st Century skills/deeper learning	√	
	• College and career readiness	√	
	• Digital citizenship		√
	• Technology skills	√	
	• Anywhere, anytime learning		√

Your District's Current Uses of Technology

This table reports the status of your district's uses of educational technology:	Available in Your District	In Your District's Plans	Not Yet a Priority
• Online coursework	√		
• Blended learning	√		
• Digital tools for problem solving (i.e., visualization, simulation, modeling, charting, etc.)		√	
• eCommunication for student discussions		√	
• eCommunication for teacher discussions		√	
• Real-world connections for student products	√		
• Tools for students to develop products that demonstrate their learning	√		
• Digital student portfolios	√		
• Online research	√		
• Intelligent adaptive learning		√	
• Digital content in a variety of formats and modes (i.e., visual, auditory, text)		√	
• Assessment data (formative and summative)		√	
• Social Media		√	

Your District's Digital Learning Environment

The following table presents the status of various elements of your district's digital learning environment:

Elements in a Digital Learning Environment	Available in Your District	In Your District's Plans	Not Yet a Priority
• Presentation tools	√		
• Productivity tools	√		
• Document management	√		
• Learning management system	√		
• eCommunication tools (Asynchronous)	√		
• eCommunication tools (Synchronous)	√		
• Library of curated digital content		√	
• Collaborative workspaces	√		
• Visualization tools	√		
• Multimedia production tools	√		
• Social Media	√		

Please keep the district's vision, uses of technology, and digital learning environment in mind when considering the reports on the following pages. Each of these is a prerequisite to your district's readiness across the seven gears and the leadership component.

Strategic Use of This Report

The purpose of this self-assessment is to provide your distict's "readiness to implement" scores in the context of the seven gears in the Future Ready framework, as well as provide your district with a "way forward" in closing gaps. To do so, the Alliance for Excellent Education, in partnership with the Metiri Group, is providing rubrics for each element of the gears. To find your district's way forward, simply note your district's stage of readiness as reported on the following pages, and map that back to the associated rubric. Target next steps by looking at the table cell that represents the next level to the right. A score at the "staging" level indicates that your district is ready for implementation.

The rubrics have been developed based on the following levels of readiness:

Investigating	Envisioning	Planning	Staging
District leaders are becoming more deeply informed about emerging research, trends, best practices, and added value related to digital learning. They are supported in their investigation through conference attendance, webinars, and in-depth discussions at district leadership meetings to ensure deep understanding that informs their vision of digital learning.	District leaders have identified viable new directions for the school district. They have reviewed the possibilities, built scenarios for how those possibilities would look in their district, and, working in tandem with key stakeholders, established a common vision of the future.	District leaders have established indicators of success based on the vision, set a baseline, and conducted a gap analysis. They have forged a plan for closing the gaps and identified key strategies for making progress toward those targets. They have projected benchmarks and milestones and created timelines, associated work plans, management plans, and budgets.	District leaders have enacted policies, established new structures, identified budgets, and assigned roles and responsibilities that collectively stage the district well for achieving the outcomes described in the vision. Where appropriate, they have undertaken pilots to document the efficacy of the elements of the plan. Once the district reaches the staging level, it is ready to begin full implementation.

Once your district's readiness scores are mapped to the rubrics and targets are set for improvements, take advantage of the many U.S. Department of Education and the Alliance for Excellent Education events, activities, and resources (see http://tech.ed.gov/futurereadypledge/ , http://www.plan4progress.org , and www.mooc-ed.org).
The schedules include events and resources based on each gear, as well as the courses offered through the Friday Institute, an Alliance partner.

GEAR 1: Curriculum, Instruction, and Assessment

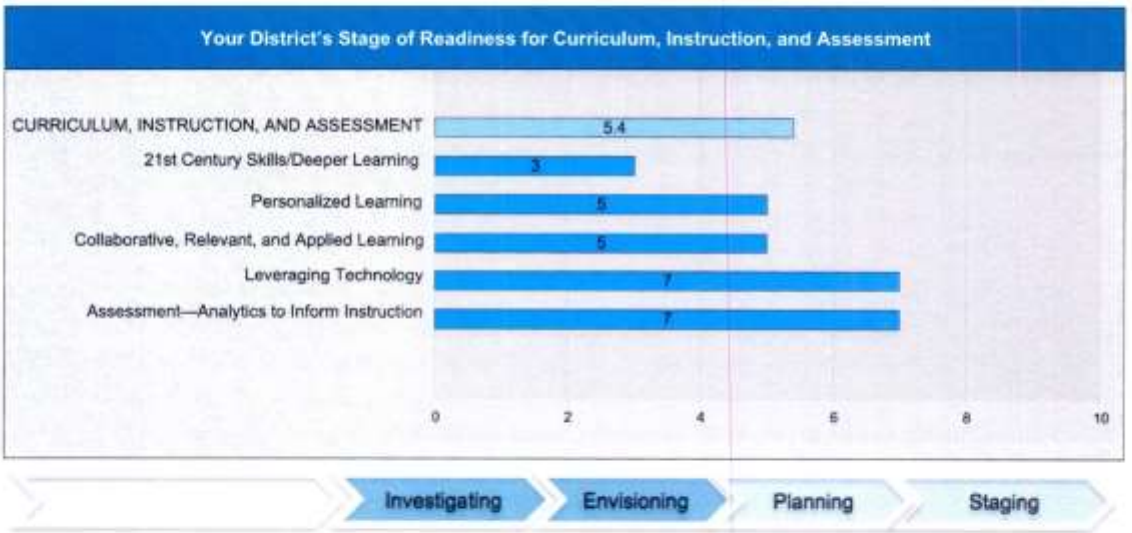
Through a more flexible, consistent, and personalized approach to academic content design, instruction, and assessment, teachers will have robust and adaptive tools to customize the instruction for groups of students or on a student-to-student basis to ensure relevance and deep understanding of complex issues and topics. Providing multiple sources of high quality academic content offers students much greater opportunities to personalize learning and reflect on their own work, think critically, and engage frequently to enable deeper understanding of complex topics. Data are the building blocks of diagnostic, formative, and summative assessments—all of which are key elements in a system where learning is personalized, individualized, and differentiated to ensure learner success. The essential elements that comprise this gear are listed below.

CURRICULUM, INSTRUCTION, AND ASSESSMENT:

- 21st Century Skills/Deeper Learning
- Personalized Learning
- Collaborative, Relevant, and Applied Learning
- Leveraging Technology
- Assessment—Analytics to Inform Instruction

Your district provided the following vision for Curriculum, Instruction, and Assessment:

Curriculum is being built at the school level- each location is built on a different set of demographics. The district is beginning the building of curriculum in multiple mediums and requiring our vendors to provide these resources to our district.



Depth of Your District's Knowledge Base: Curriculum, Instruction, and Assessment

Investigating, researching, and professional discussions are critical at all levels. The chart below reports the depth of your district's leadership team's knowledge base for Curriculum, Instruction, and Assessment:

Confidence of Your Leadership Team in Discussing Topics Related to Curriculum, Instruction, and Assessment for Digital Learning	Not Yet Prepared to Discuss	Could Discuss After Additional Research	Could Discuss with Confidence Now
Creating strategies for building college and career readiness through digital learning.	√		
Leveraging diverse resources accessible through technology to personalize learning for all students.		√	
Providing students with the opportunity and specific skills to collaborate within and outside of the school, in the context of rich, authentic learning.		√	
Instituting research-based practice for the use of technology in support of learning.		√	
Transitioning to a system of digital and online assessment (diagnostic, formative, adaptive, and summative) to support continuous feedback loops improvement informed by data.		√	

Strategic Interpretation of Your District's Data

Displayed below are the elements for this gear, your district's progress toward them, and associated rubrics. To use this data strategically, begin by locating your district's readiness level on the rubric based on your district's reported scores. A look to the immediate right will be your district's potential targets. If at the "staging" level, your district is ready for implementation.

Rubrics for Curriculum, Instruction, and Assessment (Gear 1)

21st Century Skills/Deeper Learning: Readiness Score of 3

Curriculum, instruction, and assessment are based on clear expectations that all students will leave the education system well staged for college acceptance or for alternative paths to workplace readiness. These expectations mandate solid grounding in standards-based content; elements of deeper learning, such as critical thinking, creativity and innovation, and self-direction; and opportunities for authentic learning in the context of today's digital society.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
21st Century Skills/Deeper Learning	District leaders familiarize themselves and staff with new state learning standards and with principles and strategies for 21st Century skills/deeper learning.	21st Century skills/ deeper learning outcomes are explicitly referenced in the district's vision of the college and career ready student.	Instructional leaders formally integrate 21st Century skills/deeper learning into all curriculum documents. District leaders develop explicit plans for building the capacity of the system to develop 21st Century skills/deeper learning skills in students. In addition, they develop plans for assessing these skills/ outcomes on an equal footing with content skills.	District leaders communicate new expectations for college and career readiness that incorporate 21st Century skills/deeper learning. They begin awareness trainings to orient educators to new curricular scope and sequences, guides to 21st Century skills/deeper learning, and upcoming series of associated professional development. They pilot programs that incorporate the new vision for learning.

Personalized Learning: Readiness Score of 5

Educators leverage technology and diverse learning resources to personalize the learning experience for each student. Personalization involves tailoring content, pacing, and feedback to the needs of each student and empowering students to regulate and take ownership of some aspects of their learning.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Personalized Learning	District leaders research personalized learning and document the characteristics of personalized learning environments and the requirements for building these characteristics.	A vision for personalized learning is written and communicated, and includes rich scenarios of practice in multiple grade levels and content areas.	Instructional leaders develop plans for supporting and training staff members to promote personalization of learning. Organizational tools, primarily technology based, are designed to assist students and teachers.	Instructional leaders prepare a plan for implementing personalized learning at all levels. This plan includes organizational tools, professional development, and examples of practice aimed at multiple levels and content areas.

Collaborative, Relevant, and Applied Learning: Readiness Score of 5

In digital learning environments, students do work similar to that of professionals in the larger society. They collaborate with educators, fellow students, and others outside of the school environment on projects that often (1) involve the creation of knowledge products, (2) foster deep learning, and (3) have value beyond the classroom walls.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Collaborative, Relevant, and Applied Learning	District leaders review the research related to rich, authentic learning, including variants, such as project- and problem-based learning. Teams have also gathered research and best practices on collaboration.	The concept of student work as collaborative and authentic is central to the district's vision. District leaders gather examples of teaching and learning, meeting these criteria through research and piloting.	Instructional leaders review all curricula for opportunities for rich, authentic, and collaborative learning and document these opportunities.	Instructional leaders prepare a plan for implementing rich, authentic work, which includes unit designs and templates, professional development, and support for teachers as they scale up new instructional practices.

Leveraging Technology: Readiness Score of 7

Educators in digital learning environments integrate technology seamlessly into the teaching and learning process. These educators have the skills to adopt and adapt to new technologies and filters, which assure that the use of technology adds value to the learning process.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Leveraging Technology	District technology and curriculum staff members collaborate in an investigation of the latest research and best practices related to the use of technology in learning.	District leaders establish a vision for the digital learning classroom that illustrates the role technology plays in supporting these new learning environments.	Instructional leaders review all curricula for opportunities to apply current technologies to improve teaching and learning in ways that align with research and best practices. They then integrate these technologies into all curriculum documents.	Instructional leaders prepare a plan for proactively integrating technology into teaching and learning practices throughout the district. This includes professional development and a sequence illustrating expected uses within the curriculum and rich examples of effective practices in pilots.

Assessment—Analytics to Inform Instruction: Readiness Score of 7

The district and its schools use technology as vehicles for diagnostic, formative, and summative assessment. The school system has mechanisms (i.e., processes and digital environments) for using data to improve, enrich, and guide the learning process. Educators actively use data to guide choices related to curriculum, content, and instructional strategies.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Assessment—Analytics to Inform Instruction	District leaders are becoming more deeply informed about the type of assessments they will need to assess content and process standards and 21st Century competencies. They continue to investigate and confirm findings.	District leaders have identified the type of assessments that will be required to track progress over time, but have yet to establish specific indicators, metrics, or instruments.	District leaders have established the metrics for use in determining student progress toward learning goals. They have established or identified the associated summative assessments, but have yet to design or establish formative or diagnostic assessments.	Instructional leaders have established a series of diagnostic, formative, and summative assessments, and associated analytics and reports mapped to expected learning outcomes. Educators are prepared to use the data generated by these assessments to track student progress over time, identify gaps, and make changes to improve results.

Summary

These rubrics should give your district strong guidance in determining its next targets for closing gaps in Gear 1. Your district is encouraged to follow Future Ready events and activities at the U.S. Department of Education at: http://tech.ed.gov/futurereadypledge/

In addition, resources related to Curriculum, Instruction, and Assessment can be accessed at the Alliance for Excellent Education site, http://www.plan4progress.org/Page/173 , which includes information on how to participate in a free course offered by the Friday Institute.

GEAR 2: Use of Time

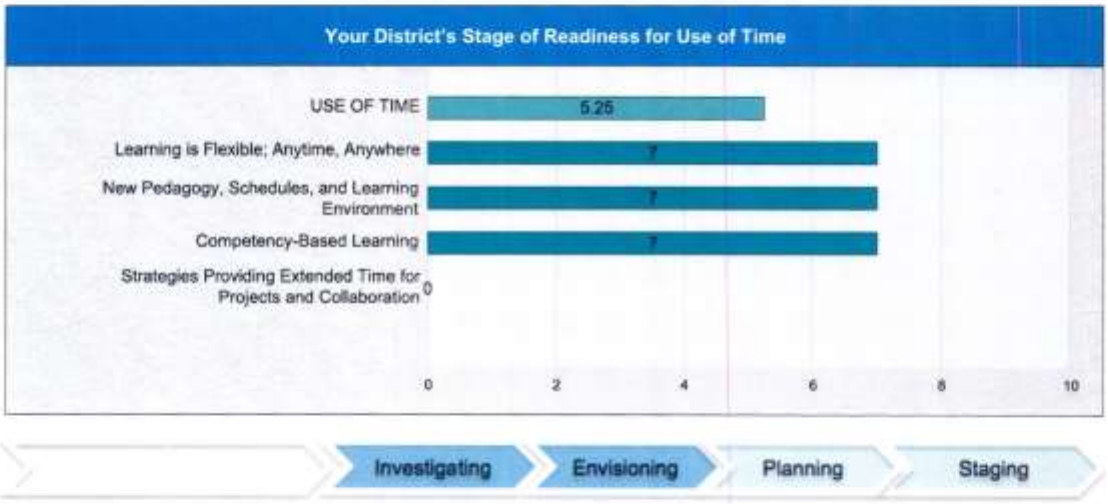
Student-centric learning requires changes in the way instructional time is used. Many schools are shifting away from Carnegie units to competency-based learning. This type of system adapts learning to meet the needs, pace, interests, and preferences of the learner. This transition is made possible through innovative uses of technology for diagnostic, formative and summative assessments, for managing learning, for engaging students in learning, and for providing anywhere, anytime learning. Such transitions required districts to rethink and more effectively leverage the use of instructional time. The essential elements for this gear are listed below.

USE OF TIME

- Learning is Flexible; Anytime, Anywhere
- New Pedagogy, Schedules, and Learning Environment for Personalized Learning
- Competency-Based Learning
- Strategies for Providing Extended Time for Projects and Collaboration

Your District provided the following Use of Time vision:

Many of instructional areas are built on concepts that necessitate physical seat time. (Trade related) All instructors are working with the consultant to transform the environment.



Depth of Your District's Knowledge Base: Use of Time

Investigating, researching, and professional discussions are critical at all levels. The chart below reports the depth of your district's leadership team's knowledge base for Use of Time:

Confidence of Your Leadership Team in Discussing Topics Related to Use of Time for Digital Learning	Not Yet Prepared to Discuss	Could Discuss After Some Additional Research	Could Discuss with Confidence Now
Identifying options for providing students with online and digital learning options for anywhere, anytime learning.			√
Rethinking the use of instructional time and school schedules to provide students with extended time for projects and collaboration, and to provide the flexibility required for personalized, student-centric learning.		√	
Identifying merits of allowing students flexibility in the time it takes them to complete a course or attain a standard (competency-based learning).	√		

Strategic Interpretation of Your District's Data

Displayed below are the elements for this gear, your district's progress toward them, and associated rubrics. To use this data strategically, begin by locating your district's readiness level on the rubric based on your district's reported scores. A look to the immediate right will be your district's potential targets. If at the "staging" level, your district is ready for implementation.

Rubrics for Use of Time (Gear 2)

Learning is Flexible; Anytime, Anywhere: Readiness Score of 7

By leveraging technology and media resources, online learning options are available for students at any time of day, from home, at school, and in the community.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Learning is Flexible; Anytime, Anywhere	District leaders investigate options for providing devices and high-speed, access to students in school and beyond. District personnel attend conference sessions, visit other districts, and talk with colleagues about various solutions for provisioning students with devices and access. They investigate models of online and blended learning that enable anytime, anywhere learning.	District leaders envision how various strategies for access would work in their schools, (e.g., one-to-one programs, bring your own device (BYOD), community-wide internet access, and partnerships with community groups/ programs). They have a technological approach in mind and a vision for leveraging the technology into anytime, anywhere learning.	District leaders embark on a community-based planning process to map the way toward the vision of anytime, anywhere learning through technology. The plan includes deploying technological solutions to enable anytime, anywhere learning and offering blended and online learning solutions for students.	District leaders develop a current responsible use policy; design a system for rolling out devices on a large scale; establish a digital learning environment for access in and outside of school; and prepare teachers to use the system.

New Pedagogy, Schedules, & Learning Environment for Personalized Learning: Readiness Score of 7

To facilitate more personalized learning, educators work together to identify and validate new designs for personalized learning wherein the use of time is adaptable and flexible. Associated resources are made available to students both synchronously and asynchronously to promote flexibility.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
New pedagogy, schedules, and learning environment for personalized learning	District leaders review the research related to rich, authentic learning, including variants such as project- and problem-based learning. They also gather research and best practices on teaming and collaboration.	The concept of student work as collaborative and authentic is central to the district's vision. District leaders gather examples of teaching and learning, meeting these criteria through research and piloting.	Instructional leaders review all curricula for opportunities for rich, authentic, and collaborative learning and document these opportunities.	Instructional leaders prepare a plan for implementing rich, authentic work, which includes unit designs and templates, professional development, and support for teachers as they scale up new instructional practices.

Competency-Based Learning: Readiness Score of 7

Along with flexible schedules, and as one facet of personalized learning, the pace of learning is flexible based on the needs of individual students and the challenges of complex, project-based work. Students move on to a new standard or course upon mastery.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Competency-Based Learning	District leaders define and investigate the use of competency-based education.	District leaders select a model for competency-based education that enables it to personalize learning for students, enabling them to control their pace and pathway through standards-aligned content and, as appropriate, to determine when and where they learn.	District leaders make plans for transitioning to competency-based learning. A learning management system enables students (as appropriate) to accumulate grades and credits based on performance. Plans for the redesign of curriculum, instruction, and assessment are established accordingly.	District leaders enact new policies that establish competency-based learning. Based on the district's plan, curriculum, instruction, assessment, professional development, and communications are all staged for the transition.

Strategies for Providing Extended Time for Projects and Collaboration: Readiness Score of 0

Rather than rigid schedules and short class periods, time allocations are flexible, allowing for extended work time for complex projects. Digital learning enables students to productively use time during and beyond the school day, often repurposing what was previously homework time.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Strategies for Providing Extended Time for Projects and Collaboration	District leaders investigate various structures and strategies for providing extended periods of time for students' authentic learning and personalized learning. Successful models are investigated for each level (elementary, middle, and high).	District leaders create a common vision for the role of authentic student projects conducted across the curriculum. Teams at all levels (elementary, middle, and high) develop a clear understanding of how learning structures and schedules will shift due to the transition to authentic projects. They select models for each level.	District leaders develop a plan for transitioning to a curriculum that provides flexible time for student engagement in authentic personalized, and/or project-based learning.	The district's vision includes mention of authentic and personalized learning. The structures are determined to provide flexible and adaptable scheduling of time to accommodate learner needs and they are ready to be implemented. The capacity building needed to stage this work is underway, including communications to parents and the community, professional development, piloting, etc.

Summary

These rubrics should give your district strong guidance in determining its next targets for closing gaps in Gear 2. Your district is encouraged to follow Future Ready events and activities at the U.S. Department of Education at: http://tech.ed.gov/futurereadypledge/

In addition, resources related to Use of Time can be accessed at the Alliance for Excellent Education site, http://www.plan4progress.org/Page/177 , which includes information on how to participate in a free course offered by the Friday Institute.

GEAR 3: Technology, Networks, and Hardware

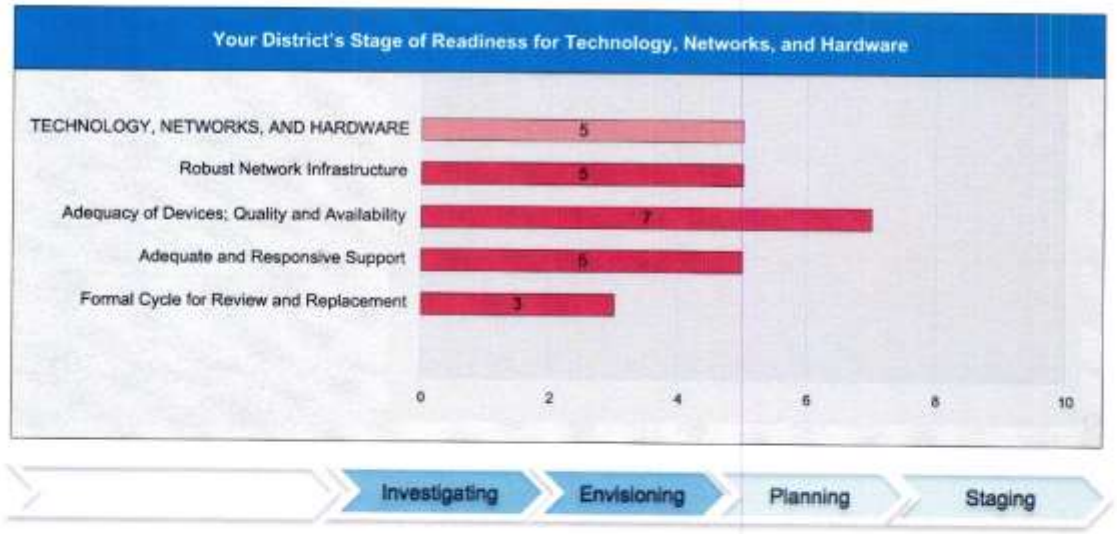
When employed as part of a comprehensive educational strategy, the effective use of technology provides tools, resources, data, and supportive systems that increase teaching opportunities and promote efficiency. Such environments enable anytime, anywhere learning based on competency and mastery with empowered caring adults who are guiding the way for each student to succeed. High quality, high-speed technology systems within a school district are essential to the advancing of digital learning. The essential elements that comprise this gear are listed below.

TECHNOLOGY, NETWORKS, AND HARDWARE

- Robust Network Infrastructure
- Adequacy of Devices; Quality and Availability
- Adequate and Responsive Support
- Formal Cycle for Review and Replacement

Your district provided the following Technology, Networks, and Hardware vision:

> Technology hardware and software is annually reviewed . Budgets are created to support the curricular needs and direction of each content area.



Depth of Your District's Knowledge Base on Technology, Networks, and Hardware

Investigating, researching, and professional discussions are critical at all levels. The chart below reports the depth of your district's leadership team's knowledge base for technology, networks, and hardware:

Confidence of Leadership Team in Discussing Topics Related to Technology, Networks, and Hardware for Digital Learning	Not Yet Prepared to Discuss	Could Discuss After Additional Research	Could Discuss with Confidence Now
Identifying options available to districts to ensure that appropriate internet-ready technology devices are available to support teaching and learning.		√	
Identifying elements and implementation of a robust, responsive, and safe network infrastructure.		√	
Identifying elements of a positive, effective, service-oriented technology support system.	√		
Creating a comprehensive, environmentally sound cycle for review and replacement of technology software, hardware, and infrastructure.		√	

Strategic Interpretation of Your District's Data

Displayed below are the elements for this gear, your district's progress toward them, and associated rubrics. To use this data strategically, begin by locating your district's readiness level on the rubric based on your district's reported scores. A look to the immediate right will be your district's potential targets. If at the "staging" level, your district is ready for implementation.

Rubrics for Technology, Networks, and Hardware (Gear 3)

Robust Network Infrastructure: Readiness Score of 5

Adequate bandwidth and a supportive infrastructure are in place to ensure ready and consistent access to online resources for teaching and learning. Teams monitor usage and identify possible bottlenecks prior to them affecting teaching and learning. The school community collaboratively designs responsible use policies, and confirm that the network design is supportive of these policies.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Robust Network Infrastructure	Technology leaders assess current network capabilities and future network needs, both at school and in the communities that they serve. They collaborate with parents, students, and staff members to research elements of a responsible use policy.	Technology leaders ensure their vision includes an element of robust and equitable network access at school and in the home. They integrate a plan for responsible use into that vision.	Technology leaders develop plans for a network infrastructure that is robust and extensible. Plans include district facilities and a comprehensive set of options for home access as well. The entire school community collaboratively develops a formal responsible use policy.	Technology leaders are staged to roll out a robust network infrastructure that anticipates learning needs and facilitates access anytime, anywhere. A responsible use policy is completed and accepted by the entire school community.

Adequacy of Devices; Quality and Availability: Readiness Score of 7

The school has considered diverse and creative options to ensure that appropriate internet-ready technology devices are available to students to support learning at any time.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Adequacy of Devices; Quality and Availability	District leaders conduct a needs assessment for learning technologies. They investigate multiple strategies for providing technology devices to meet identified needs or improve efficiency.	District leaders develop a vision that clearly defines a role for technology in service of learning.	District leaders develop a plan for procuring and placing devices to provide equitable access in support of learning.	The district is well staged to deploy identified technologies, including plans for budgeting and purchasing, placement/ distribution, and training and support.

Adequate and Responsive Support: Readiness Score of 5

Sufficient support, characterized by a positive service orientation, is available in every school. This support is proactive, providing resources, coaching, and just-in-time instruction to prepare teachers and students to use new technologies, thereby reducing the need for interventions during the learning process.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Adequate and Responsive Support	District leaders examine desirable levels and methods for providing technology support, including needs assessment activities.	District leaders establish a vision and criteria for comprehensive, service-oriented support services that prioritize support for research-based teaching and learning practices.	District leaders develop a comprehensive plan for support that is driven by the teaching and learning goals of the district.	District leaders are staged for a program of comprehensive, learning-centered, and proactive support.

Formal Cycle for Review and Replacement: Readiness Score of 3

Teams continuously monitor technologies—software, hardware, and infrastructure—to ensure upgrades, additions, and, when called for, sunsetting/eliminations in a timely and proactive fashion.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Formal Cycle for Review and Replacement	Technology leaders investigate model review and replacement policies. They conduct a comprehensive internal inventory and review disposal policies.	Technology leaders commit to a review and replacement policy that is both economically efficient and environmentally responsible. This policy is formally documented and integrated with district teaching and learning priorities.	Technology leaders build a plan for reviewing and replacing all technology devices and infrastructure. They build this into annual maintenance and operations budgets.	Technology leaders prepare a comprehensive plan that documents and updates policies, current inventories; defines upgrade and replacement schedules; identifies annual budgets; and outlines an environmentally responsible disposal policy.

Summary

These rubrics should give your district strong guidance in determining its next targets for closing gaps in Gear 3. Your district is encouraged to follow Future Ready events and activities at the U.S. Department of Education at: http://tech.ed.gov/futurereadypledge/

In addition, resources related to Technology, Networks, and Hardware can be accessed at the Alliance for Excellent Education site, http://www.plan4progress.org/Page/176 , which includes information on how to participate in a free course offered by the Friday Institute.

GEAR 4: Data and Privacy

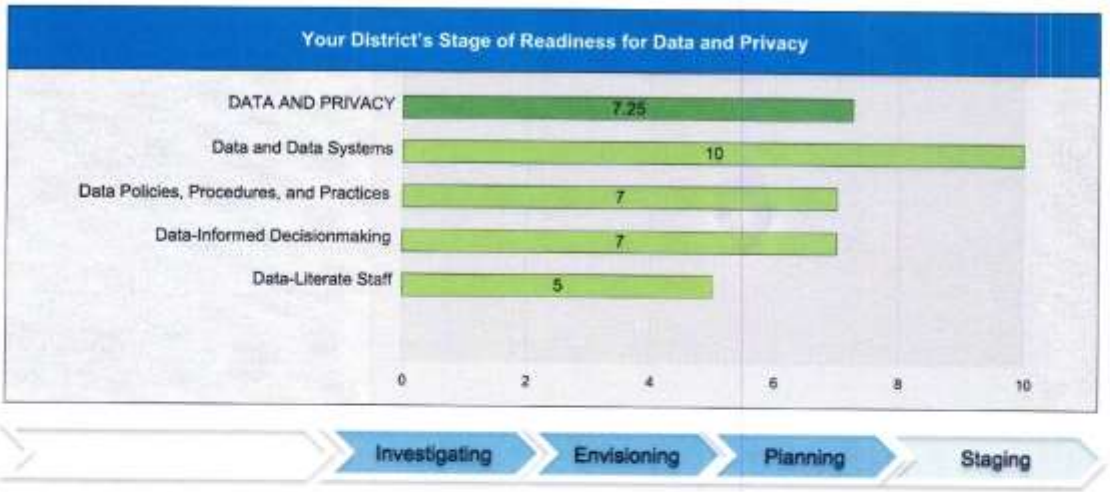
Data and privacy are foundational elements of digital learning. A personalized, learner-centered environment uses technology to collect, analyze, and organize data to improve the effectiveness and efficiency of learning. Data is the building block of diagnostic, formative, and summative assessments—all of which are key elements in a system where learning is personalized, individualized, and differentiated to ensure learner success. The district ensures that sound data privacy and security policies, procedures, and practices are in place at the district, school, classroom, and student levels. The essential elements that comprise this gear are listed below.

DATA AND PRIVACY

- Data and Data Systems
- Data Policies, Procedures, and Practices
- Data-Informed Decisionmaking
- Data-Literate Staff

Your district provided the following Data and Privacy vision:

policies are set by governing state agency



Depth of Your District's Knowledge Base on Data and Privacy

Investigating, researching, and professional discussions are critical at all levels. The chart below reports the depth of your district's leadership team's knowledge base for Data and Privacy:

Confidence of Leadership Team in Discussing Topics Related to Data and Privacy for Digital Learning	Not Yet Prepared to Discuss	Could Discuss After Additional Research	Could Discuss with Confidence Now
Discuss data governance policies and procedures that ensure privacy, safety, and security in data collection, analysis, storage, retrieval, exchanges, and archiving, to meet standards legal requirements (i.e., FERPA and CIPA).		√	
Discuss the data systems, security procedures, and support systems required to ensure that a range of accurate, reliable data sets and associated reports are available, on demand, to authorized users.		√	
Identify the challenges and opportunities in transitioning to a system of online assessment (formative and summative).		√	

Strategic Interpretation of Your District's Data

Displayed below are the elements for this gear, your district's progress toward them, and associated rubrics. To use this data strategically, begin by locating your district's readiness level on the rubric based on your district's reported scores. A look to the immediate right will be your district's potential targets. If at the "staging" level, your district is ready for implementation.

Rubrics for Data and Privacy (Gear 4)

Data and Data Systems: Readiness Score of 10

To facilitate data-driven decisionmaking, appropriate data (i.e., data dashboards and data analytics) are readily available, easily comprehensible, and useful for supporting the decisionmaking processes. These data are available at any time, on any desktop, and from any location. The data are made available through real-time access to data dashboards, data analytics, and data warehouses.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Data and Data Systems	District leaders investigate new models for storing and accessing data, including systems for learning management, online assessment, student information, and longitudinal data.	District leaders envision how online assessments and data systems will operate in the context of other district reforms. They are working on how to ensure data are readily available, secure, easily comprehensible, and useful for supporting the decisionmaking process.	District leaders write technical specifications for the data systems required to attain the vision for learning, teaching, and management (e.g., infrastructure, data systems, student information systems, longitudinal data systems, learning management systems, support, etc.). They develop a plan for acquiring, deploying, operating, securing, maintaining, supporting, and upgrading the system over time.	District leaders establish data systems and online assessments (e.g., release of RFP, hiring of contractors, etc.). They hire and/or train the information technology staff members required to deploy and maintain such a system. The system includes real-time access to data dashboards, data analytics, and data warehouses for authorized users.

Data Policies, Procedures, and Practices: Readiness Score of 7

Using the Family Educational Rights and Privacy Act (FERPA) as the basis, the district has up-to-date policies, procedures, and practices that address legal, ethical, and safety issues related to the privacy and security of data, and the usage of data, technology, and the Internet. Such policies, procedures and practices address the collection, storage, analysis, reporting, transmission, and archiving of data, as well as the usage of data, the Internet, and technology by students and education professionals in the course of teaching, learning, communications, and the management of school services.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Data Policies, Procedures, and Practices	District leaders investigate federal, state, and local laws on privacy and security of data in education systems. They also review policies and procedures on safety, security, and privacy in other districts.	District leaders conduct in-district discussions with policymakers related to the legal, ethical, and safety issues related to privacy and security of data in schools. They secure common understanding among district leaders on the topic.	District leaders draft data governance policies and procedures related to data usage, privacy, and security for review and commentary.	District leaders adopt formal governance structures (policies and procedures) related to data usage, privacy, and security. They then develop a communication, implementation, oversight, and evaluation plan to ensure comprehensive application.

Data-Informed Decisionmaking: Readiness Score of 7

The use of formative and summative assessment data is part of the school culture, with administrators, teachers, and, perhaps most importantly, students actively using this data to improve learning. Assessment is not viewed as punitive, but rather as part of the teaching and learning process. There is an expectation in the district that data will inform all teaching and learning practices and decisions. This is modeled at all levels of the school system, from administration to the students themselves.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Data-Informed Decisionmaking	District leaders investigate what it means for decisionmaking to be data-informed. In doing so, they document various models of evidence-based reasoning and data-driven decisionmaking as well as learning management systems. District leaders listen to other district leaders report on their work in building and transitioning to data cultures. They also identify models where students are engaged in a culture of evidence-based reasoning.	District leaders conduct visioning sessions with stakeholders that elicit their perspectives on how the district will look as a strong data culture. Scenarios incorporate all aspects of the process, including typical days in the lives of students, staff members, and parents operating in such a culture.	District leaders embark on a community-based planning process that to transition the district into a culture of evidence-based reasoning and data-informed decisionmaking. The plan includes a timeline, budget, and glide path toward the vision.	District leaders set formal expectations for data-driven decisionmaking and evidence-based reasoning at the district and school levels. They integrate these concepts into school improvement plans, staff development offerings, decisionmaking processes, and investment set-asides. At the student level, curricular materials are purchased; teaching training sessions are offered, and evidence-based reasoning is integrated into student learning standards.

Data-Literate Staff: Readiness Score of 5

Educators in the system are data-literate. They are aware of the legal and ethical responsibility to ensure security, accuracy, and privacy in the collection, analysis, exchange of, and reporting of data. They understand the potential uses and misuses of data in the teaching and learning process and act accordingly. All education professionals in the district use data to inform instructional and administrative decisionmaking.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Data-Literate Staff	District leaders investigate evidence-based reasoning and data-driven decisionmaking, including the types of training and professional development staff members will need to use such systems effectively.	District leaders create data-driven decisionmaking scenarios that include informed, well-trained, knowledgeable staff members and students.	District leaders' strategic planning includes explicit details to provide ongoing professional development and training support to staff members and students. Included in those plans are leadership decisions that establish data-informed decisionmaking and evidence-based reasoning as goals.	District leaders set clear expectations for the use of evidence-based reasoning and data-informed decisionmaking in learning, teaching, and administration by a targeted date. They provide training and professional development courses/in-services, including a course on evidence-based reasoning and self-assessment by students.

Summary

These rubrics should give your district strong guidance in determining its next targets for closing gaps in Gear 4. Your district is encouraged to follow Future Ready events and activities at the U.S. Department of Education at: http://tech.ed.gov/futurereadypledge/

In addition, resources related to Data and Privacy can be accessed at the Alliance for Excellent Education site, http://www.plan4progress.org/Page/174 , which includes information on how to participate in a free course offered by the Friday Institute.

GEAR 5: Community Partnerships

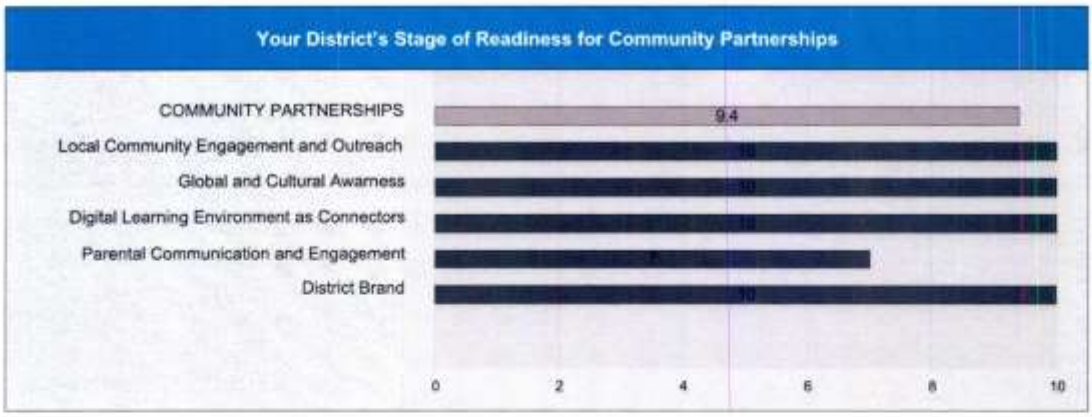
Community partnerships include the formal and informal local and global community connections, collaborative projects, and relationships that advance the school's learning goals. Digital communications, online communities, social media, and digital learning environments often serve as connectors for these partnerships. The essential elements that comprise this gear are listed below.

COMMUNITY PARTNERSHIPS

- Local Community Engagement and Outreach
- Global and Cultural Awareness
- Digital Learning Environments as Connectors to Local/Global Communities
- Parental Communication and Engagement
- District Brand

Your district provided the following vision for Community Partnerships:

The district has a strong family engagement model that is throughout all buildings.



Depth of Your Team's District's Knowledge Base on Community Partnerships

Investigating, researching, and professional discussions are critical at all levels. The chart below reports the depth of your district's leadership team's knowledge base for Community Partnerships:

Confidence of Leadership Team in Discussing Topics Related to Community Partnerships.	Not Yet Prepared to Discuss	Could Discuss After Additional Research	Could Discuss with Confidence Now
Teaching and learning enriched through local community partnerships (i.e., increased access, relevance, opportunities for public exhibitions of student work, etc.).		√	
Community partnerships that build global and cultural awareness in students.		√	
Strategies for ensuring that digital/online learning environments serve as vehicles to enable local and global community partnerships.			√
Home-school communication that are enhanced and enriched through technology.			√
District creation of a "brand," that positions the district as a positive, 21st Century force in the lives of students and the community.			√

Strategic Interpretation of Your District's Data

Displayed below are the elements for this gear, your district's progress toward them, and associated rubrics. To use this data strategically, begin by locating your district's readiness level on the rubric based on your district's reported scores. A look to the immediate right will be your district's potential targets. If at the "staging" level, your district is ready for implementation.

Rubrics for Community Partnerships (Gear 5)

Local Community Engagement and Outreach: Readiness Score of 10

The school serves as a hub of the community. As such, it actively involves the community in achieving its learning goals, reaching out to the community to (1) extend learning into community centers, libraries, museums, and other public spaces; (2) bring relevance to curricula through partnerships that take the shape of apprenticeships, community service, and the use of community-based experts and resources; (3) implement community-based exhibitions, reviews, critiques, and celebrations of student work; and (4) coordinate afterschool programs, including collaboration with the school and students' teachers. Community Engagement and Outreach.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Local Community Engagement and Outreach	District leaders annually survey the community for opportunities for partnerships and cooperative relationships. Their communication outreach and public forums provide community members a voice in school decisions and activities.	District leaders are continuously seeking community partnerships (e.g., extending learning into community centers, libraries, museums, community-based exhibitions, coordinated afterschool programs).	District leaders establish a formal plan or plans to engage the community in viable partnerships and coordinated activities.	District leaders establish school-community partnerships as a strategic goal, with clear parameters for such partnerships, including processes for considering, vetting, and engaging in such partnerships.

Global and Cultural Awareness: Readiness Score of 10

The community partnerships extend and deepen students' knowledge, understanding, and appreciation of cultures and communities other than their own. Digital networks enable students and education professionals to connect, interact, and collaborate with other students, experts, and organizations from remote sites. The school builds the capacity of students to recognize and value diversity, enabling them to participate successfully in community partnerships online and face-to-face.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Expectations for Learner-Centered Environments	District leaders conduct a review of effective models of school-community partnerships that build global and cultural awareness. Representatives attend conference sessions, talk with district leaders who are implementing such programs, and identify key characteristics of effective learner-centered practices.	District leaders conduct public and internal sessions on school-community partnerships locally and globally. Educators across the district envision such environments at all levels. District leaders include global and cultural awareness in their district and school visions.	District leaders establish a formal planning process to develop an implementation plan that supports/ establishes local and global community partnerships at all levels. That plan includes a glide path, budget, infrastructure, and pathway for schools to make this transition.	District leaders establish and communicate clear expectations that schools/ classrooms will include opportunities for local and global community partnerships. All capacity-building elements are in place or carefully readied for implementation (e.g., associated series of professional development and training, models, curricular materials, and instructional coaches).

Digital Learning Environments as Connectors to Local/Global Communities: Readiness Score of 10

The school district has established a digital learning environment that offers access, eCommunication, resource libraries, file exchanges, and Web 2.0 tools that facilitate interactions among peers and between teachers, parents, and students in school and beyond. District leaders build digital citizenship in students and structure online communities that to ensure online safety and security.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Digital Learning Environments as Connectors to Local and Global Communities	District leaders review information on the critical elements of an online learning environment (e.g., access, eCommunication, resource libraries, file exchanges, and Web tools) that facilitate interactions among peers and between teachers, parents, and students in school and beyond.	District leaders map the elements of a digital learning environment to its vision of personalization of learning, student-centered learning, deeper learning, and global and cultural awareness. In doing so, they envision student work, interactions, exchanges, and contributions at all levels, within the school and beyond, with local and global communities. Pilots of various aspects of the environment have been authorized and are underway.	With stakeholder input and collaboration, district leaders build a plan that outlines the steps and milestones to establishing a digital learning environment, with outreach into local and global communities. They align the elements of that environment to its vision. The school reviews the results from various authorized pilots that test the elements of the environment to inform final decisions.	District leaders finalize the technical specifications for a digital learning environment with outreach into local and global communities. They build and deploy the environment or authorize and fund a group to do so. They offer training and professional development to ensure effective use. Support structures are in place.

Parental Communication and Engagement: Readiness Score of 10

School leaders engage parents and students in home-to-school communications through a variety of venues. While this may include internet-based solutions, it also includes options that do not depend on connectivity in the home.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Parental Communication and Engagement	District leaders research options for parental communications and engagement. They survey connectivity needs among parents before designing communication systems.	District leaders include specific language and requirements for parental communications and engagement in all district plans, instructional and technological. They envision a communication system designed for parents that is flexible and adaptable to meet the families' needs.	District leaders develop a comprehensive plan for parental communication and engagement that includes both connected and traditional communications media.	District leaders design, produce, and deploy a robust communication system that is responsive to the needs of individual families. The system is flexible and adaptable at the school level. It includes specific strategies for drawing parents into frequent dialogue with staff members regarding the needs and accomplishments of their children.

District Brand: Readiness Score of 10

Branding is defined as the marketing practice of creating a name, symbol, or design that identifies and differentiates a product from other products. It's critical that our schools develop a brand as well and that the brand is transparent to all members within the organization—they must all be telling the same story, one that they believe in and stand behind.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
District Brand	District leaders research models for establishing a brand. They survey the community to gather information on current perceptions of the district.	District leaders conduct focus groups and interviews related to the story that various constituents want the brand to convey.	District leaders develop a comprehensive plan to define the brand and use the Internet and interactive multimedia to develop the brand.	District leaders develop the web structure for the branding and the initial content for the brand. Their model includes opportunities to refresh continuously the stories that represent the brand.

Summary

These rubrics should give your district strong guidance in determining its next targets for closing gaps in Gear 5. Your district is encouraged to follow Future Ready events and activities at the U.S. Department of Education at: http://tech.ed.gov/futurereadypledge/

In addition, resources related to Community Partnerships can be accessed at the Alliance for Excellent Education site, http://www.plan4progress.org/Page/171 , which includes information on how to participate in a free course offered by the Friday Institute.

GEAR 6: Professional Learning

Technology and digital learning can increase professional learning opportunities by expanding access to high-quality, ongoing, job-embedded resources to improve student success and to create a broader understanding of the skills that comprise success in a digital age. Professional learning communities, peer-to-peer lesson sharing, and better use of data and formative assessment, combined with less emphasis on "sit and get" professional development sessions eliminate the confines of geography and time. These ever-increasing resources offer teachers, administrators, and other education professionals vast new opportunities to collaborate, learn, share, and produce best practices with colleagues in school buildings across the country. Digital leaders establish this type of collaborative culture. They model and are transparent with their own learning. In addition, educators must be engaged in more collaborative, goal-oriented approaches to the evaluation of their own teaching to serve as a personal model for the experiences that they might bring to students. The essential elements that comprise this gear are listed below.

PROFESSIONAL LEARNING

- Shared Ownership and Responsibility for Professional Growth
- 21st Century Skill Set
- Diverse Opportunities for Professional Learning Through Technology
- Broad-Based, Participative Evaluation

Your district provided the following Professional Learning vision:

District Wide Professional development plan supports all of these models

Depth of Your District's Knowledge Base on Professional Learning

Investigating, researching, and professional discussions are critical at all levels. The chart below reports the depth of your district's leadership team's knowledge base for Professional Learning:

Confidence of Your Leadership Team in Discussing Topics Related to Professional Learning for Digital Learning	Not Yet Prepared to Discuss	Could Discuss After Additional Research	Could Discuss with Confidence Now
Models of shared ownership of professional development, where district policy encourages and supports teachers and administrators in self-directed uses of online, social media for professional growth.		√	
The pedagogical shifts required for 21st Century digital learning, which will need to be addressed in teachers' and administrators' professional development.		√	
The models and merits of staff evaluation models that are goal-oriented, participatory, and focused on metrics directly related to 21st Century digital learning.		√	

Strategic Interpretation of Your District's Data

Displayed below are the elements for this gear, your district's progress toward them, and associated rubrics. To use this data strategically, begin by locating your district's readiness level on the rubric based on your district's reported scores. A look to the immediate right will be your district's potential targets. If at the "staging" level, your district is ready for implementation.

Rubrics for Professional Learning (Gear 6)

Shared Ownership and Responsibility for Professional Growth: Readiness Score of 10

Teachers, administrators, and other education professionals actively support their own professional practices by using technology to optimize teaching and learning. They are actively taking responsibility for their own professional growth through professional learning networks and online communities of practice. Educators have access to collaborative tools and environments that break down classroom, school, and district walls. Professional development encourages, facilitates, and often requires creating and maintaining professional networks both within and outside of the district, frequently leveraging the latest in social media. In addition, the district has established policies that honor and encourage personalization of professional learning for teachers, administrators and other education professionals.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Shared Ownership and Responsibility for Professional Growth	District leaders investigate the use of technology, the Internet and social media in self-directed professional learning of teachers, administrators, and other education professionals.	District leaders build on key research studies and the opportunities that digital and social media present to today's education professionals as they conceptualize shared ownership and responsibility for professional learning.	District leaders formulate a plan for shared ownership and responsibility of professional growth based on their investigations and research.	District leaders model the innovative use of technology both in the professional development offerings for the district and as they take ownership of their own professional growth. They set expectations for shared ownership and responsibility of professional learning among all education professionals in the district.

21st Century Skill Set: Readiness Score of 10

Educators expand their skill sets to move beyond content knowledge. Professional learning includes immersion into cognitive and learning sciences, providing support both for new instructional practices and for purposefully promoting deeper learning in all students. Educators master a variety of new, research-based instructional strategies to better engage students and prepare them for college and beyond.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
21st Century Skill Set	The investigative focus is on cognitive and learning sciences research related to 21st Century learning and technology-enabled learning.	District leaders build on key research studies and resulting recommendations to inform scenario building and visioning.	District leaders formulate a plan to periodically update their investigations into cognitive and learning sciences research. They build a plan to require teachers and administrators to acquire these skills and they integrate proven 21st Century skill strategies into professional development offerings.	District leaders assign roles and responsibilities for the implementation of the plan. They formally adopt expectations for education professionals to acquire such competencies within a specified timeframe, offering diverse pathways for staff to acquire such competencies.

Diverse Opportunities for Professional Learning Through Technology: Readiness Score of 10

Digital leaders model new types of professional learning and ensure that educators have access to (and the technology savvy necessary to leverage) professional development opportunities that are diverse, customizable and often supported by the latest technologies. Professional learning is available anytime in a variety of modes. Alternative models are supported through coherent policies and practices in the district.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Diverse Opportunities for Professional Development Through Technology	District leaders collect research on the effectiveness of a broad spectrum of professional development options. They also investigate recent cognitive science research on the importance of choice and participant engagement in adult learning.	District leaders consider their research findings as they strategize on the benefits and pitfalls to new, alternative forms of professional development now possible through technology and social media.	District leaders develop a plan for professional learning that includes a broad spectrum of professional learning, including technology-based, and social media-based option. The plan addresses elements essential to the success of these new options including the assurance that staff have required technologies, and that policies related to professional learning support such options.	District leaders encourage, model, and provide opportunities for a broad spectrum of professional learning. That spectrum ranges from series of face-to-face professional development, to professional learning through social media. Education professionals are expected to choose options that meet their needs and to participate fully in the professional learning District policies are revised to ensure coherence.

Broad-Based, Participative Evaluation: Readiness Score of 10

In order to promote goal-oriented, self-regulated professional behaviors, evaluation is participative (i.e., the educator who is the subject of evaluation is actively involved in goal-setting, collecting indicators of progress, and self-evaluative behaviors). Professional evaluation uses a broad set of indicators that includes student achievement, evidence of improved instructional practice, student engagement, and 21st century skill attainment.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Broad-Based, Participative Evaluation	District leaders explore and document new models for participative evaluation, but they do not yet define specific new directions.	District leaders describe and select new research-based models of evaluation that are supportive of digital learning goals. In these models, teachers play more active roles in the evaluative process and data sources enable teachers to establish goals and independently track their progress toward goals. District leaders use data sources beyond standardized assessments.	District and school leaders plan the transition to a system where evaluation is a collaborative process. Multiple data sources are identified that will allow educators to discover areas of need and collaboratively plan to meet those needs. Digital tools are identified that allow educators to access data, communicate, and collaborate in the service of professional development for digital learning.	District and school leaders make initial changes that will lead to a more collaborative evaluation process. Multiple and diverse sources of data related to student learning and 21st Century skill development are made priorities in plans and budgets.

Summary

These rubrics should give your district strong guidance in determining its next targets for closing gaps in Gear 6. Your district is encouraged to follow Future Ready events and activities at the U.S. Department of Education at: http://tech.ed.gov/futurereadypledge/

In addition, resources related to Professional Learning can be accessed at the Alliance for Excellent Education site, http://www.plan4progress.org/Page/175 , which includes information on how to participate in a free course offered by the Friday Institute.

GEAR 7: Budget and Resources

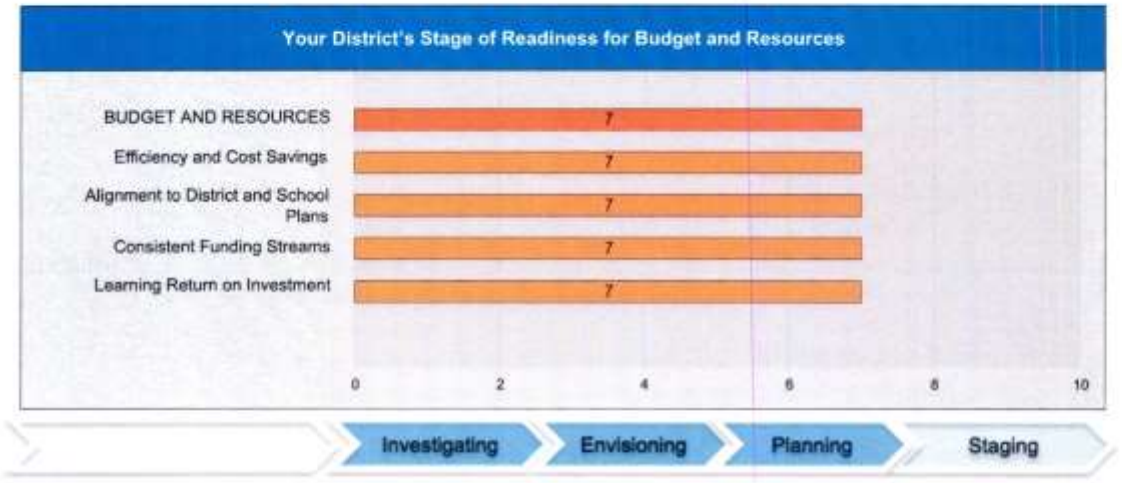
The transition to digital learning will require strategic short-term and long-term budgeting and leveraging of resources. All budgets at the district and the school should be aligned to the new vision, with consistent funding streams for both recurring and non-recurring costs. During the transition, district leaders should strive for cost-savings and efficiencies through effective uses of technology. The financial model should include the metrics and processes to ensure accountability for learning returns on investments. The essential elements that comprise this gear are listed below.

BUDGET & RESOURCES

- Efficiency and Cost Savings
- Alignment to District and School Plans
- Consistent Funding Stream
- Learning Return on Investment

Your district provided the following Budget and Resources vision:

Budgets are aligned to the district technology plan.



Depth of Your District's Knowledge Base on Budget and Resources

Investigating, researching, and professional discussions are critical at all levels. The chart below reports the depth of your district's leadership team's knowledge base for Budget and Resources:

Confidence of Your Leadership Team in Discussing Topics Related to Budget and Resources for Digital Learning	Not Yet Prepared to Discuss	Could Discuss After Additional Research	Could Discuss with Confidence Now
Discuss ways to support students with tools and resources for digital learning that offer efficiencies and cost savings (e.g., BYOD, Web 2.0 tools, free apps, etc.).		√	
Discuss strategies to support systemic digital learning that offer efficiencies and cost savings (e.g., online courses or blended learning, cloud-computing solutions, digital resources to replace textbooks, "going green", etc.).			
Discuss use of non-recurring funding for short-term digital learning initiatives (e.g., for innovative pilot programs) by leveraging business partnering, community donations and special grants.		√	

Strategic Interpretation of Your District's Data

Displayed below are the elements for this gear, your district's progress toward them, and associated rubrics. To use this data strategically, begin by locating your district's readiness level on the rubric based on your district's reported scores. A look to the immediate right will be your district's potential targets. If at the "staging" level, your district is ready for implementation.

Rubrics for Budget and Resources (Gear 7)

Efficiency and Cost Savings: Readiness Score of 7

Funding for digital learning leverages technologies that increase efficiency and cost savings. District leaders have strategies for calculating the total cost of ownership (TCO) for all technology resources.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Efficiency and Cost Savings	A cross-functional budget team participates in conferences and discusses strategies with other districts and experts on ways to fund digital learning. The team investigates options to support students with tools and resources for digital learning that offer cost savings, such as BYOD, use of web tools, free apps, etc. They also investigate strategies to support digital learning that offer efficiencies and cost savings (e.g., cloud-computing, online courses or blended learning, digital vs. Text resources centralizing IT, "going green," and communicating online).	In collaboration with stakeholders, district leaders envision possibilities and build scenarios for using digital tools and technology to reduce costs and increase efficiencies for digital learning, such as blended learning, bring your own device (BYOD), cloud-computing solutions, use of Web 2.0 tools, "going green" and "paperless," replacing third-party applications with free applications, managing vendor costs by reexamining agreements, and seeking lower cost alternatives.	District leaders demonstrate how to reduce current costs for digital learning by leveraging digital tools and technology. They align these cost-savings strategies with district- and building-level strategic and tactical plans.	District leaders develop policies, procedures, and timelines for transitioning to cost-saving strategies for digital learning. They monitor the learning return and efficiency/ effectiveness of investments and continuously adjust accordingly.

Alignment to District- and Building-Level Strategic and Tactical Plans: Readiness Score of 7

Priorities for budget and resources are clearly linked to district- and building-level strategic and tactical plans and to school improvement goals. All expenditures must be justified as supportive of these plans. Innovative programs are funded conditionally upon their alignment to the vision and mission.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Alignment to District- and Building-Level Strategic and Tactical Plans	District leaders ensure budget development activities occur after the annual academic planning processes. A cross-functional budget team investigates district- and building-level strategic and tactical plans and ways to link the budget for digital learning to these plans.	District leaders identify and prioritize expenditures for digital learning that align with district- and building-level strategic and tactical plans. They share this alignment with stakeholders, justify expenditures, and garner their support. They also envision pilots and scenarios to test options for digital learning that support strategic and tactical plans.	District leaders match digital learning expenditures that support district- and building-level strategic and tactical plans with appropriate funding streams and clarify when they will need which funds. They ensure the plan balances expenditures.	District leaders prepare to allocate and justify budgets that align with strategic and tactical plans and with cost-saving strategies that leverage technology.

Consistent Funding Streams: Readiness Score of 7

Budgets for digital learning programs and initiatives are part of the annual maintenance and operation budget for the district. Reliance on grant funding or temporary sources is minimal, and funding for digital learning is integrated into all budget areas where appropriate.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Consistent Funding Streams	District leaders investigate ways to fund digital learning programs and initiatives as part of annual maintenance and operation budgets. They work to integrate funding into all budget areas where appropriate. Though their focus is on annual budget and maintenance budgets, district leaders also investigate alternative ways to fund technology, such as business partnering, community donations, and special grants, particularly for innovative programs.	District leaders identify its current IT budget relevant to digital learning, including budget for infrastructure, hardware, instructional content, and professional development. A cross-functional budget team proposes re-allocation of that budget to align with district- and building-level strategic plans and to incorporate cost-savings options. Stakeholders support their strategies for (1) incorporating digital learning expenditures in annual maintenance and operating costs; and (2) integrating them into all budget areas as appropriate.	Based on their vision and priorities for digital learning, district leaders develop a plan that identifies (1) which technology and support are mission-critical and must be done immediately, (2) what can be done within three years, and (3) what is long term. The plan balances expenditures and has a realistic amortization model for infrastructure, maintenance, and support services, including teacher professional development and support.	District leaders are staged to make expenditures for digital learning over time with identified annual funding streams. They identify nonrecurring funding for short-term initiatives they provide streamlined and clear purchasing procedures related to technologies, associated software and services, and professional development.

Learning Return on Investment: Readiness Score of 7

All metrics for review of budget priorities are based on their demonstrated relationship to student learning goals.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Learning Return on Investment	District leaders investigate return-on-investment models and metrics that can be used to relate budget priorities for digital learning to student learning goals.	District leaders propose metrics and a methodology that demonstrate budget priorities for digital learning that relate to student learning goals.	District leaders have a plan and tools for monitoring the relationship between budget for digital learning and student learning goals.	District leaders build the financial model with metrics and a methodology for monitoring budget priorities for digital learning, based on student learning goals.

Summary

These rubrics should give your district strong guidance in determining its next targets for closing gaps in Gear 7. Your district is encouraged to follow Future Ready events and activities at the U.S. Department of Education at: http://tech.ed.gov/futurereadypledge/

In addition, resources related to Budget and Resources can be accessed at the Alliance for Excellent Education site, http://www.plan4progress.org/Page/172 , which includes information on how to participate in a free course offered by the Friday Institute.

Across the Gears

Empowered, Innovative Leadership

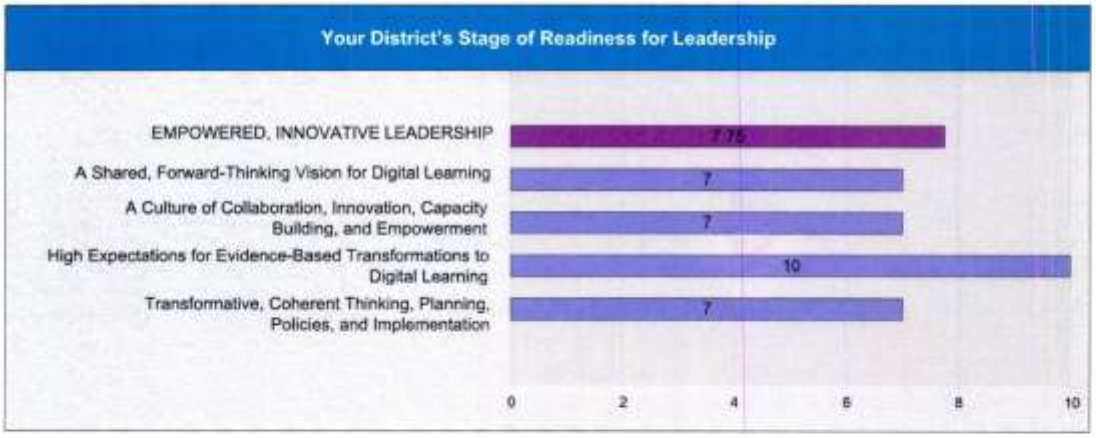
Project 24 is a systemic planning framework around the effective use of technology and digital learning to achieve the goal of "career and college readiness" for all students. While the seven interdependent P24 Gears provides a roadmap toward digital learning, success within a district is depended on innovative leadership at all levels. First and foremost, leaders within a district must be empowered to think and act innovatively, they must believe in the district's shared, forward-thinking vision for deeper learning through effective uses of digital, 21st Century technologies. Critical to their success will be a culture of innovation that builds the capacity of students, teachers, administrators, parents, and community to work collaboratively toward that preferred future. The policy foundation that results must be coherent with that vision. Unleashed in a culture of vision and empowerment, leaders will have the flexibility and adaptability they require to prepare their students to thrive in the 21st Century. The essential elements that comprise this section on leadership are listed below.

EMPOWERED, INNOVATIVE LEADERSHIP

- A Shared, Forward-Thinking Vision for Digital Learning
- A Culture of Collaboration, Innovation, Capacity Building, and Empowerment
- High Expectations for Evidence-Based Transformations to Digital Learning
- Transformative, Coherent Thinking, Planning, Policies, and Implementation

Your district provided the following Leadership vision:

District leaders meet frequently to discuss the mission/vision/direction of the district and moving towards embedded technology.



Depth of Your District's Knowledge Base on Leadership

Investigating, researching, and professional discussions are critical at all levels. The chart below reports the depth of your district's leadership team's knowledge base for Leadership:

Confidence of Leadership Team in Discussing Topics Related to Leadership for Digital Learning	Not Yet Prepared to Discuss	Could Discuss After Additional Research	Could Discuss with Confidence Now
Discuss the district's strategy for developing, communicating, implementing, and evaluating a shared, forward-thinking vision for digital learning.		√	
Discuss strategies to establish a culture of collaborative innovation, where leaders at all levels are informed, trusted, empowered, and ready to lead.		√	
Discuss the high expectations that will be required of all students, education professionals, and family/community if the district is to realize continuous, sustainable progress toward the vision.		√	
Discuss the coherent strategic, tactical, and budgetary policies and planning required to achieve the vision.		√	

Strategic Interpretation of Your District's Data

Displayed below are the elements for this gear, your district's progress toward them, and associated rubrics. To use this data strategically, begin by locating your district's readiness level on the rubric based on your district's reported scores. A look to the immediate right will be your district's potential targets. If at the "staging" level, your district is ready for implementation.

Rubrics for Leadership (Across all gears)

A Shared, Forward-Thinking Vision for Digital Learning: Readiness Score of 7

The district recognizes that, to prepare their students to thrive in today's connected, fast-paced society will require an education that engages students in evidence-based, deeper learning through smart uses of technology and new pedagogies. The district has engaged students, teachers, administrators, parents, and the community in the envisioning of a transformed education system that personalizes learning for all students through the effective uses of technology.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
A Shared, Forward-Thinking Vision for Digital Learning	A cross-functional budget team participates in conferences and discusses strategies with other districts and experts on a vision for digital learning. The team explores the economic, social, educational, and ethical underpinnings for such a vision.	The district uses the research and investigations to conceptualize the essential elements of their vision for digital learning. They develop scenarios as to how those elements would be actualized in their district, noting the benefits and consequences.	District leaders establish strategic and tactical plans for: a) developing a shared vision for digital learning, b) formally adopting that vision as a component of the district's overall goals, c) aligning all programs to the vision, and d) establishing metrics to assess progress toward the vision.	District leaders have engaged students, teachers, administrators, parents, and the community in the envisioning of a transformed education system that provides personalized, deeper learning through the effective uses of technology. The vision has been formally adopted, communicated internally and externally. The district's policies, plans, and programs are reviewed and aligned to the vision.

A Culture of Collaboration, Innovation, Capacity Building, and Empowerment: Readiness Score of 7

The District leadership team has established a collaborative culture of innovation in which leaders at all level are empowered to innovate. The capacity of leaders to innovate is maximized through a culture of trust and respect, providing leaders with the flexibility and adaptability they require to lead. This culture leads to sustainable change, informed by research and facilitated by digital leaders.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
A Culture of Collaboration, Innovation, Capacity Building, and Empowerment	District leaders are becoming more deeply informed about creative, innovative, empowered leadership. They have established a research base that identifies the potential outcomes for a culture of collaboration, innovation, capacity building, and empowerment in leadership.	Based on their research, district leaders have identified the type of leadership that has the greatest potential for transforming the district. The leadership they identified as optimal is collaborative, where leaders at all levels are empowered to act innovatively, and creatively provided such actions have high potential for advancing the district vision.	District leaders have established a plan for transitioning to a collaborative culture of change, where empowered leaders have the flexibility, adaptability, responsibility, and authority to act, provided such actions have high potential to advance the vision.	The capacity of leaders to innovate is maximized through capacity building within a culture of trust and respect. This culture provides leaders with the flexibility and adaptability to innovate, which in turn leads to sustainable change, informed by research and driven by the district vision for digital learning.

High Expectations for Evidence-Based Transformations to Digital Learning: Readiness Score of 1

Across the district, teachers, administrators, and students are expected to show progress toward the district vision. The district has established metrics for gauging such progress and is working across the district to monitor progress and to use evidence-based decision making to ensure that technologies are implemented in ways that advance the vision.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
High Expectations for Evidence-Based Transformations to Digital Learning	District leaders analyze research studies on the potential impact of digital leaning on student attainment of the learning goals, thus forming a knowledge base on digital learning. They also document various models of evidence-based reasoning and models of change management.	District leaders carefully review the resultant knowledge base on digital learning resulting from their investigation. Based on that evidence, they envision a time when instructional decisions are informed by this knowledge base.	District leaders develop plans for building the capacity of education professionals to use the knowledge base to inform decisions. They pilot projects where teachers collaborate to identify and close gaps in student learning through digital learning.	District leaders set high expectations for the district, schools, and classrooms to adopt the types of digital learning shown to be effective with targeted students. To ensure success, the district provides the conditions essential to local, evidence-based decisionmaking related to digital learning.

Transformative, Coherent Thinking, Planning, Policies, and Implementation: Readiness Score of 7

The district's forward-thinking vision is advanced through leaders' transformative thinking. Leaders have ensured that the district's policies are coherence with the philosophy underpinning the vision (e.g., personalizing professional learning for education professionals, just as they personalize learning for students). They have developed strategic plans that map potential pathways to the district's preferred future, and have created the tactical and financial plans and dedicated budget necessary for implementation. As they implement they monitor, adjust, build capacity, and incrementally improve.

Levels	Investigating (1-3)	Envisioning (4-5)	Planning (6-7)	Staging (8-10)
Transformative, Coherent Thinking, Planning, Policies, and Implementation	District leaders study the processes by which other districts successfully transformed their school system to deeper and extend learning through technology.	District leaders identify the changes that will be required in their schools in order to attain the vision they have set for digital, 21st Century learning.	District leaders develop a strategic plan to advance digital learning. The plan uses the P24 framework to ensure coherent thinking across the system's policies, procedures, cultures, practices, and investments.	District leaders work with policymakers to adopt the strategic plan as a way forward to attaining the vision. While working toward coherence across the district, the plan is implemented in ways that empower district and school leaders and teams with the flexibility to think and innovate as they make decisions that meet the needs of learners in their charge.

Summary

These rubrics should give your district strong guidance in determining its next targets for closing gaps in Leadership. Your district is encouraged to follow Future Ready events and activities at the U.S. Department of Education at: http://tech.ed.gov/futurereadypledge/

In addition, resources related to Innovative Leadership can be accessed at the Alliance for Excellent Education site, http://www.plan4progress.org/Page/331 , which includes information on how to participate in a free course offered by the Friday Institute.

Connecticut Technical High School System's Vision for Digital Learning

A summary of your district's vision statements from your district's self-assessment:

Vision for students:

Students are able to learn anytime, anywhere over multiple mediums.

Curriculum, Instruction, and Assessment (Gear 1):

Curriculum is being built at the school level- each location is built on a different set of demographics. The district is beginning the building of curriculum in multiple mediums and requiring our vendors to provide these resources to our district.

Use of Time (Gear 2):

Many of instructional areas are built on concepts that necessitate physical seat time. (Trade related) All instructors are working with the consultant to transform the environment.

Technology, Networks, and Hardware (Gear 3):

Technology hardware and software is annually reviewed . Budgets are created to support the curricular needs and direction of each content area.

Data and Privacy (Gear 4):

policies are set by governing state agency

Community Partnerships (Gear 5):

The district has a strong family engagement model that is throughout all buildings.

Professional Learning (Gear 6):

District Wide Professional development plan supports all of these models

Budget and Resources (Gear 7):

Budgets are aligned to the district technology plan.

Leadership (Across all gears):

District leaders meet frequently to discuss the mission/vision/direction of the district and moving towards embedded technology.

The Future Ready Schools Initiative is a bold new initiative, led by the Alliance for Excellent Education, supported by the US Department of Education, and in partnership with the LEAD Commission and a vast coalition of organizations, working to support school district superintendents and their leadership teams on district-wide transformation. For additional resources to guide your district's transformation, visit the Future Ready Website at:
www.futurereadyschools.org

For further information, contact:

Tom Murray
State and District Digital Learning Director
Alliance for Excellent Education
tmurray@all4ed.org

Glossary

Adaptive learning. An approach that uses technology to engage students in interactive learning activities, which are customized to meet each individual's learning needs, based on continuous feedback and data analytics.

Authentic learning. A general model for designing learning activities that are rigorous, in-depth and have value beyond the classroom. The work assigned in authentic learning environments often mirrors the type of work done in the real world.

Blended learning. Blended learning describes models of learning where a student learns at least in part at a supervised brick and-mortar location away from home and at least in part through online delivery with some element of student control over time, place, path, and/or pace; often synonymous with hybrid learning. (Horn and Staker, 2011)

21st Century Skills. 21st Century Skills are essential skills that children need to succeed as citizens and workers in the 21st century. They include core subjects, 21st century content, learning and thinking skills, ICT literacy, and life skills.

Collaborative Workspaces. Any tool that allows for collaboration or access to shared documents such as Google Docs or TeamBox.

Competency-based. A type of learning where the student advances in mastery of a set of competencies at a pace, and often in an order, determined by the student.

Data culture. An educational environment characterized by the effective use of data and evidence-based reasoning.

Deeper learning. Deeper learning prepares students to know and master core academic content, think critically and solve complex problems, work collaboratively, communicate effectively, and be self-directed and able to incorporate feedback. It enables graduating high school students to be college and career ready and to make maximum use of their knowledge in life and work.

Digital Citizenship. Understanding the safety concerns, rights and responsibilities necessary to access and participate in online communications or communities.

Document Management. Tools for storing, sharing and organizing documents such as drop boxes, file storage and organization tools, shared public spaces, etc.

Performance-based. Learning activities that require complex performances as demonstrations of knowledge.

Personalized learning. An approach to learning that is student-centric, where students have a significant degree of control and choice in what, when, and how they learn.

Privacy: The balance between collection and dissemination of data, technology, and individuals' right to have their personal information kept private. (Source: Data Quality Campaign.)

Project-based learning. Inquiry-based learning where learning takes place in response to a complex question or challenge.

Security: The policies and practices implemented at the state, district, and school levels to ensure that data are kept safe from corruption and that access is limited and appropriate. Data security helps ensure privacy and protects personally identifiable information. (Source: Data Quality Campaign.)

Synchronous Tools. Communication tools that support real-time communication such as webinars, Skype or chat rooms.

Visualization Tools. Tools that support the visual representation of thinking and ideas such as charting, graphing, or concept mapping tools.

Appendix M: OER & Vetting Process

What are Open Educational Resources (OER)

Open Educational Resources (OER) are teaching and learning materials that you may freely use and reuse, without charge. That means they have been authored or created by an individual or organization that chooses to retain few, if any, ownership rights. For some of these resources, that means you can download the resource and share it with colleagues and students. For others, it may be that you can download a resource, edit it in some way, and then re-post it as a remixed work. OER often have a Creative Commons or GNU license that state specifically how the material may be used, reused, adapted, and shared

What are Open Educational Resources (OER)?

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Why use OER Commons?

The Internet is rich with open educational resources for teachers and learners. However, finding those resources is often time-consuming. OER Commons helps educators, students, and lifelong learners find Open Educational Resources through a single point of access from which they can search, browse, and evaluate resources in OER Common's growing collection of 50,000 high-quality OER.

Open educational resources (OER) are part of the Open Education movement, and teachers, students, and learning institutions are driving its development. Educational leaders around the world are tapping into OER as a cost saving source of curriculum, and also because of the opportunity it provides for supporting teaching practice and learning in a flexible, equitable, collaborative and participatory manner.

What are some examples of OER Materials?

- Full university courses, complete with readings, videos of lectures, homework assignments, and lecture notes.
- Interactive mini-lessons and simulations about a specific topic, such as math or physics.
- Adaptations of existing open work.
- Electronic textbooks that are peer-reviewed and frequently updated.
- Elementary school and high school (K-12) lesson plans, worksheets, and activities that are aligned with state standards.

What is OER Commons?

A Brief Background

ISKME created OER Commons, publicly launched in February 2007, to support and build a knowledge base around the use and reuse of open educational resources (OER). As a network for teaching and learning materials, the site offers engagement with resources for curriculum alignment, quality evaluation, social bookmarking, tagging, rating, and reviewing.

OER Commons has forged alliances with over 500 major content partners in order to provide a single point of access to the highest quality content from around the world. Users can search across over 42,000 vetted and fully-indexed OER, ensuring a

high level of resource relevancy and discovery. Since these resources are 'open,' they are available for educational use, and many hold Creative Commons licenses that allow them to be repurposed, modified and adapted for a diverse array of local contexts.

The worldwide OER movement is rooted in the idea that equitable access to high-quality education is a global imperative. Open Educational Resources (OER) offer opportunities for systemic change in teaching and learning through accessible content, and importantly, through embedding participatory processes and effective technologies for engaging with learning. By leveraging our technical infrastructure and developing teacher training models that facilitate participation with OER, the OER Commons project aims to grow a sustainable culture of sharing among educators at all levels.

Through our training and professional development initiatives, we work directly with curriculum specialists, educational agencies, professional organizations, teachers, and students to engage in new ways with learning resources. We develop, facilitate, and evaluate educational programs including professional development workshops, forums, international teacher resource exchanges, online knowledge-sharing collaboratives, and online course materials.

The CTECS is utilizing the OER Common vetting process for OER resources which uses the following criteria:

Rubrics for Evaluating Open Education Resource (OER) Object

The following rubrics represent an evaluation system for objects found within Open Education Resources. An object could include images, applets, lessons, units, assessments and more. For the purpose of this evaluation, any component that can exist as a stand-alone qualifies as an object. The rubrics in this packet can be applied across content areas and object types.

In general, the rubrics should be applied to the smallest meaningful unit. In some cases, this may be a single lesson or instructional support material, while in others it might be a complete unit of study or set of support materials. If multiple lessons are included in an OER, the reviewer needs to determine if all lessons will be examined, if only those lessons that deal with essential aspects of the curriculum are to be considered, or if it would be best to evaluate random lessons, looking at, for example, every third or fifth lesson.

These rubrics are typically used to rate the potential, not actual, effectiveness of a particular object in a learning environment. Each rubric should be scored independently of the others using the following five scores that describe levels of potential quality, usefulness, or alignment to standards:

3: Superior
2: Strong
1: Limited
0: Very Weak / None
N/A: Rubric Not Applicable

The not applicable (N/A) rating should be used any time a particular rubric does not apply to the object being rated. This is not a pejorative score; it simply means it would be inappropriate to apply this rubric to this object. For example, Rubric IV: Quality of Assessment would not be applicable to an object that does not have an assessment component.

The following rubrics are included:

Rubric I. Degree of Alignment to Standards
Rubric II. Quality of Explanation of the Subject Matter
Rubric III. Utility of Materials Designed to Support Teaching
Rubric IV. Quality of Assessment
Rubric V. Quality of Technological Interactivity
Rubric VI. Quality of Instructional and Practice Exercises
Rubric VII. Opportunities for Deeper Learning
Rubric VIII. Assurance of Accessibility

Rubric I: Degree of Alignment to Standards

This rubric is applied to learning objects that have suggested alignments to standards. It is used to rate the degree to which an individual object actually aligns to each proposed standard. The rubric was designed specifically for the Common Core State Standards, but can be used with any set of standards. Before the rubric can be applied, the assumption is that a user has proposed an alignment between the object and the selected standard(s).

There are two major aspects of standards that are vital to a meaningful alignment review: content and performance expectations. It is important that the content addressed in the object matches the content addressed in each proposed standard. Evaluating the alignment of the performances required in both the object and the standard is equally essential and should be considered along with the content.

Rubric I Scoring Guide:
3: An object has superior alignment only if both of the following are true:

- All of the content and performance expectations in the identified standard are completely addressed by the object.
- The content and performance expectations of the identified standard are the focus of the object. While some objects may cover a range of standards that could potentially be aligned, for a superior alignment the content and performance expectations must not be a peripheral part of the object.

2: An object has strong alignment for either one of two reasons:

- Minor elements of the standard are not addressed in the object.
- The content and performance expectations of the standard align to a minor part of the object.

1: An object has limited alignment if a significant part of the content or performance expectations of the identified standard is not addressed in the object, as long as there is fidelity to the part it does cover. For example, an object that aligns to CCSS 2.NBT.2, “Count within 1000; skip-count by 5s, 10s, and 100s,” but only addresses counting numbers to 500, would be considered to have limited alignment. The object aligns very closely with a limited part of the standard.

0: An object has very weak alignment for either one of two reasons:

- The object does not match the intended standards.
- The object matches only to minimally important aspects of a standard. These objects will not typically be useful for instruction of core concepts and performances covered by the standard.

N/A: This rubric does not apply for an object that has no suggested standards for alignment.
For example, the rubric might not be applicable to a set of raw data.

Rubric II: Quality of Explanation of the Subject Matter

This rubric is applied to objects designed to explain subject matter. It is used to rate how thoroughly the subject matter is explained or otherwise revealed in the object. Teachers might use this object with a whole class, a small group, or an individual student. Students might use the object to self-tutor. For objects that are primarily intended for teacher use, the rubric is applied to the explanation of the subject matter not to the planning instructions for the teacher.

Rubric II Scoring Guide:

3: An object is rated superior for explanation of subject matter only if all of the following are true:

- The object provides comprehensive information so effectively that the target audience should be able to understand the subject matter.
- The object connects important associated concepts within the subject matter. For example, a lesson on multi-digit addition makes connections with place value, rather than simply showing how to add multi-digit numbers. Or a lesson designed to analyze how an author develops ideas across extended text would make connections among the various developmental steps and the various purposes the author has for the text.
- The object does not need to be augmented with additional explanation or materials.
- The main ideas of the subject matter addressed in the object are clearly identified for the learner.

2: An object is rated strong for explanation of subject matter if it explains the subject matter in a way that makes skills, procedures, concepts, and/or information understandable. It falls short of superior in that it does not make connections among important associated concepts within the subject matter. For example, a lesson on multi-digit addition may focus on the procedure and fail to connect it with place value.

1: An object is rated limited for explanation of subject matter if it explains the subject matter correctly but in a limited way. This cursory treatment of the content is not sufficiently developed for a first-time learner of the content. The explanations are not thorough and would likely serve as a review for most learners.
0: An object is rated very weak or no value for explanation of subject matter if its explanations are confusing or contain errors. There is little likelihood that this object will contribute to understanding.

N/A: This rubric is not applicable (N/A) for an object that is not designed to explain subject matter, for example, a sheet of mathematical formulae or a map. It may be possible to apply the object in some way that aids a learner's understanding, but that is beyond any obvious or described purpose of the object.

Rubric III: Utility of Materials Designed to Support Teaching

This rubric is applied to objects designed to support teachers in planning or presenting subject matter. The primary user would be a teacher. This rubric evaluates the potential utility of an object at the intended grade level for the majority of instructors.

Rubric III Scoring Guide:

3: An object is rated superior for the utility of materials designed to support teaching only if all of the following are true:

- The object provides materials that are comprehensive and easy to understand and use.
- The object includes suggestions for ways to use the materials with a variety of learners.
- These suggestions include materials such as “common error analysis tips” and “precursor skills and knowledge” that go beyond the basic lesson or unit elements.
- All objects and all components are provided and function as intended and described. For example, the time needed for lesson planning appears accurately estimated, materials lists are complete, and explanations make sense.
- For larger objects like units, materials facilitate the use of a mix of instructional approaches (direct instruction, group work, investigations, etc.).

2: An object is rated strong for the utility of materials designed to support teaching if it offers materials that are comprehensive and easy to understand and use but falls short of “superior” for either one of two reasons:

- The object does not include suggestions for ways to use the materials with a variety of learners (e.g., error analysis tips).
- Some core components (e.g., directions) are underdeveloped in the object.

1: An object is rated limited for the utility of materials designed to support teaching if it includes a useful approach or idea to teach an important topic but falls short of “strong” for either one of two reasons:
The object is missing important elements (e.g. directions for some parts of a lesson are not included).
Important elements do not function as they are intended to (e.g. directions are unclear or practice exercises are missing or inadequate). Teachers would need to supplement this object to use it effectively.

0: An object is rated very weak or no value for the utility of materials designed to support teaching if it is confusing, contains errors, is missing important elements, or is for some other reason simply not useful, in spite of an intention to be used as a support for teachers in planning or preparation.

N/A: This rubric is not applicable (N/A) for an object that is not designed to support teachers in planning and/or presenting subject matter. It may be possible that an educator could find an application for such an object during a lesson, but that would not be the intended use.

Rubric IV: Quality of Assessments

This rubric is applied to those objects designed to determine what a student knows before, during, or after a topic is taught. When many assessment items are included in one object, as is often the case, the rubric is applied to the entire set.

Rubric IV Scoring Guide:

3: An object is rated superior for the quality of its assessments only if all of the following are true:

- All of the skills and knowledge assessed align clearly to the content and performance expectations intended, as stated or implied in the object.
- Nothing is assessed that is not included in the scope of intended material unless it is differentiated as extension material.
- The most important aspects of the expectations are targeted and are given appropriate weight/attention in the assessment.
- The assessment modes used in the object, such as selected response, long and short constructed response, or group work require the student to demonstrate proficiency in the intended concept/skill.
- The level of difficulty is a result of the complexity of the subject-area content and performance expectations and of the degree of cognitive demand, rather than a result of unrelated issues (e.g. overly complex vocabulary used in math word problems).

2: An object is rated strong for the quality of its assessments if it assesses all of the content and performance expectations intended, but the assessment modes used do not consistently offer the student opportunities to demonstrate proficiency in the intended concept/skill.

1: An object is rated limited for the quality of its assessments if it assesses some of the content or performance expectations intended, as stated or implicit in the object, but omits some important content or performance expectations and/or fails to offer the student opportunities to demonstrate proficiency in the intended content/skills.

0: An object is rated very weak or no value for the quality of its assessments if its assessments contain significant errors, do not assess important content/skills, are written in a way that is confusing to students, or are unsound for other reasons.

N/A: This rubric is not applicable (N/A) for an object that is not designed to have an assessment component. Even if one might imagine ways an object could be used for assessment purposes, if it is not the intended purpose, not applicable is the appropriate score.

Rubric V: Quality of Technological Interactivity

This rubric is applied to objects designed with a technology-based interactive component. It is used to rate the degree and quality of the interactivity of that component. “Interactivity” is used broadly to mean that the object responds to the user, in other words, it behaves differently based on what the user does. This is not a rating for technology in general, but for technological interactivity. The rubric does not apply to interaction between students, but rather to how the technology responds to the individual user.

Rubric V Scoring Guide:
3: An object, or interactive component of an object, is rated superior for the quality of its technological interactivity only if all of the following are true:

- The object is responsive to student input in a way that creates an individualized learning experience. This means the object adapts to the user based on what s/he does, or the object allows the user some flexibility or individual control during the learning experience.
- The interactive element is purposeful and directly related to learning.
- The object is well-designed and easy to use, encouraging learner use.

The object appears to function flawlessly on the intended platform.
2: An object, or interactive component of an object, is rated strong for the quality of its technological interactivity if it has an interactive feature that is purposeful and directly related to learning, but does not provide an individualized learning experience. Similarly to the superior objects, strong interactive objects must be well designed, easy-to-use, and function flawlessly on the intended platform. Some technological elements may not be directly related to the content but for a strong rating they must not detract from the learning experience. These kinds of interactive elements, including earning points or achieving levels for correct answers, might be designed to increase student motivation and to build content understanding by rewarding or entertaining the learner, and may extend the time the user engages with the content.

1: An object, or interactive component of an object, is rated limited for the quality of its technological interactivity if its interactive element does not relate to the subject matter and may detract from the learning experience. These kinds of interactive elements may slightly increase motivation but do not provide strong support for understanding the subject matter addressed in the object. It is unlikely that this interactive feature will increase understanding or extend the time a user engages with the content.

0: An object, or interactive component of an object, is rated very weak or no value for the quality of its technological interactivity if it has interactive features that are poorly conceived and/or executed. The interactive features might fail to operate as intended, distract the user, or unnecessarily take up user time.

N/A: This rubric is not applicable (N/A) for an object that does not have an interactive technological element. For example, the rubric does not apply if interaction with the object is limited to, for example, opening a user-selected

Rubric VI: Quality of Instructional and Practice Exercises

This rubric is applied to objects that contain exercises designed to provide an opportunity to practice and strengthen specific skills and knowledge. The purpose of these exercises is to deepen understanding of subject matter and to routinize foundational skills and procedures.

When concepts and skills are introduced, providing a sufficient number of exercises to support skill acquisition is critical. However when integrating skills in complex tasks, the number of exercise problems is less important than their richness. These types of practice opportunities may include as few as one or two instructional exercises designed to provide practice applying specific concepts and/or skills. Sets of practice exercises are treated as a single object, with the rubric applied to an entire group.

Rubric VI Scoring Guide:

3: An object is rated superior for the quality of its instructional and practice exercises only if all of the following are true:
The object offers more exercises than needed for the average student to facilitate mastery of the targeted skills, as stated or implied in the object. For complex tasks, one or two rich practice exercises may be considered more than enough.
The exercises are clearly written and supported by accurate answer keys or scoring guidelines as applicable.
There are a variety of exercise types and/or the exercises are available in a variety of formats, as appropriate to the targeted concepts and skills. For more complex practice exercises the formats used provide an opportunity for the learner to integrate a variety of skills.

2: An object is rated strong for the quality of its instructional and practice exercises if it offers only a sufficient number of well-written exercises to facilitate mastery of targeted skills, which are supported by accurate answer keys or scoring guidelines, but there is little variety of exercise types or formats.

1: An object is rated limited for the quality of its instructional and practice exercises if it has some, but too few exercises to facilitate mastery of the targeted skills, is without answer keys, and provides no variation in type or format.

0: An object is rated very weak or no value for the quality of its instructional and practice exercises if the exercises provided do not facilitate mastery of the targeted skills, contain errors, or are unsound for other reasons.

N/A: This rubric is not applicable (N/A) to an object that does not include opportunities to practice targeted skills.

Appendix O: Curriculum Review Cycle

5-Year Curriculum Renewal Cycle

The renewal cycle includes five key stages.

1. **Review and Research -** This is the process of comparing the actual district program to ideal programs that may exist in other districts/real work force areas.

The ideal program will be determined by conducting a comprehensive review of research and recommendations of best practice, reviewing state and national standards in the given field and conducting a complete scope and sequence of the standards and competencies. A variety of data is gathered and reviewed in determining what the actual, new program may look like. This data might include but would not be limited to:

- Review of current curriculum documents
- Results of curriculum mapping/scope and sequence exercises
- Curriculum audits of materials
- Assessment of staff development
- Feedback from staff, parents, students, and CTEAC members
- Review of standardized assessment/trade related credentialing data
- Review of district assessment data
- Analysis of the interrelationship between the area and other content areas

The evaluation is the systematic comparison of the ideal program that has been identified through research and the actual program that has been described and assessed by collecting data. The evaluation reveals areas of strength in the current program as well as the deficiencies that need to be addressed during the curriculum development.

Budget Focus: During this phase, resources are budgeted for curriculum development during the following year. Thus, we work on the curriculum the year prior to program and material purchase and implementation of the new curriculum that September.

2. **Curriculum Development –** This process begins with establishing a shared vision for the program content, mission statements that will lead to the fulfillment of the vision and a completed scope and sequence/curriculum map. The vision/goal of the program describes the shared values the school community holds regarding the program as well as those areas our students need to know to be successful upon completion of their education at the CTECS. The mission statements describe what needs to be accomplished on the path to fulfilling the vision/goal. While the vision/goal is simple, enduring and never fully attained, the mission statements provide a focal point of every effort, are clear and compelling, and provide more of a short-term focus.

During the curriculum development process, all program options are considered and investigated. Pilots may take place to determine the effectiveness of options. When pilots are used they are carefully evaluated and research-based decisions are made regarding content, scope, and sequence.

This is the stage in which actual curriculum is written. Involvement of staff and administration is absolutely critical at this stage. We have developed a curriculum format that details the components and requirements of curriculum documents. A major benefit of the model we use over the previous model is that curriculum will be written during the last week of June prior to implementation September. This provides teachers with an opportunity to study the curriculum and plan for teaching over the summer.

This is also the time we plan for the program evaluation. The foundations of program evaluation should be established during this stage. Benchmarks for program success and student success indicators have to be

established during the scope and sequence portion of this process and assist us in determining if the program is working.

The Curriculum Writing Committee under the direction of the Superintendent and administrators from each level of education are responsible for completing the task of writing the curriculum. The following timeline describes the process to be used for curriculum writing.

Curriculum Review and Development Timeline:

Curriculum Review and Development Committee Established (May/June, the spring prior to in-depth curriculum review) – The committee is formed by the Superintendent of Schools. The composition and scope of the committee will be at the discretion of the Superintendent.

The Curriculum Committees may be composed as follows:

- Superintendent and Administrator(s), Committee Chairs
- Teacher(s) from target grade/subject levels
- Technology Director, as needed
- Director of Student Services, as needed
- Other Director(s)/Department Heads – as needed to promote curriculum integration
- Student services representative(s), as needed

Major tasks of the Curriculum Review and Development Committee

a) Establishes vision and missions of program (May/June)
b) Completes vision and missions of program (September/October)
c) Reviews evaluation data and conclusions (October/November)
d) Establishes guidelines for writing of curriculum (October/January)
   Scope and Sequence
   Identifies content to be taught
   Identifies units

e) Researches instructional materials/programs (January/February)
f) Identifies, pilots and selects instructional materials/programs (February)
g) Recommends implementation budget to the Principal (February)
h) Proposes and presents new course(s) to Board when necessary (February/March)
i) Reviews curriculum writing products (March/April)

- Reviews/revises curriculum
- Coordinates sequence of material
- Assures coverage of skills across curriculum and grades
- Establishes benchmarks for program evaluation

j) Assigns curriculum writing tasks (May/June)

- By units, themes
- Identifies, pilots, and recommends materials to support units/curricula
- Teams of teachers write units when appropriate

h) Presents curriculum to staff (June/August)

A plan for dissemination of the curriculum is critical to successful implementation. This includes training for the program. The actual initial training is part of the next stage (Initial Implementation). Systems for proper materials purchasing, distribution and support are established prior to implementation.

Budget Focus: Prior to the final budget being established by the Board of Education, materials acquisition and staff development is planned for program implementation. Early in this stage, planning and budgeting of resources is done for program implementation the following year.

3. Initial Curriculum and Program Implementation – This is the stage when the curriculum is put into practice in classrooms.

Staff development is the major focus during this stage. Workshops are planned during the school year and/or summer to support the implementation. District staff development time, grade level meetings and/or department meetings will be used to provide staff training for successful implementation. Other support systems for teachers are put in place. These might include, but are not limited to, email support, a mentor system, a buddy system, or other innovative strategies. Time is allocated from department/team level meetings to articulate about the new curriculum and share strategies that work.

Checkpoints are established to gather feedback from teachers. Adjustments in implementation and staff development are made along the way. Program observations are conducted during this year. Observation of teacher performance in implementing the new curriculum is emphasized since teachers are teaching brand new material. Emphasis in observation is placed on the program by looking for correct implementation and interpretation of the curriculum, continuity in delivery, and other important aspects of implementation. Lesson plans and unit plans are assessed to obtain understanding of program implementation. This information is used to impact the staff development program to provide continued support.

4. **Curriculum revisions –** Based on input gathered during the school year and feedback from teachers and administrators some revisions to the curriculum may be necessary.

Budget Focus: Continued support of the successful program. Budgeting for replenishment of materials and purchase of materials to accommodate enrollment growth and new staff.

5. **Full implementation** – At this point, the program is fully operational in all the target classrooms. Teachers are implementing curriculum and instruction in direct alignment with the newly established program. This full implementation continues throughout the curriculum evaluation and development years. This is a stage to continue to collect data for comprehensive program evaluation the following year. Staff development could be done in needed areas. Observation of teacher performance is appropriate during this stage.

Budget Focus: Continued support of the successful program. Budgeting for replenishment of materials and purchase of materials to accommodate enrollment growth and new staff.

Textbook/Resource Selection Guide – A digital process to review and evaluate resources aligned to curriculum revisions.

http://bit.ly/2orLGFs

Connecticut Technical Education and Career System

Curriculum and Instruction Cycle Time lines by Year

Program evaluation and Renewal Cycle

Year 1- Evaluate

- Survey Stakeholders
- Assess Performance
- Review and evaluate literature and research
- Write and submit summary report to CTECS Curriculum Committee

Year 2 - Design

- Review and Establish philosophy
- Establish and Write/Align to Standards and Benchmarks
- Develop units of instruction
- Address subject area assurances
- Develop a student assessment and program evaluation design
- Approval to the CTECS Curriculum Committee and CTECS Board

Year 2 Materials Adoption

- Review commercial textbooks and materials
- Develop instructional materials as needed
- Display Materials for public review/edit
- Formal approval of materials

Years 2-3 Training

- Staff Development
- Parent Orientations

Year 3 Implementation

- Provide Support Structure
- Continue staff and parent training

Year 4-5 Monitor and Adjust

- Establish Meeting structures
    - grade Level meetings
    - content meetings
    - cluster meetings
- On-going surveys of staff and parents
- Review student assessment and program evaluations results
- Make corrections and revisions

Appendix P: Textbook Review Process

Textbook and Materials Selection Guide

Connecticut Technical High Schools

* Required

Date: *

Your answer

Title of Text/Resource *

Your answer

Copyright Date/Edition

Your answer

Author

Your answer

Publisher

Your answer

Course Resource is to be used with *

Your answer

Grade Level (s):

- [ ] 9
- [ ] 10
- [ ] 11
- [ ] 12

Rate each Section According to the following scale:
5-Excellent 4-Good 3- Average 2 -Below Average 1-Poor

Your answer

Is the text aligned with the Common Core State Standards, Connecticut State Standards and/or National curriculum standards? *

1	2	3	4	5
○	○	○	○	○

Scorer: *

Your answer

Does the text support the content and objectives of the curriculum? *

1	2	3	4	5
○	○	○	○	○

Readability - Will Students be able to read the text? Are the illustrations clear, informative, ,and attractive? Is the format of the text appropriate for students at this grade level? *

1	2	3	4	5
○	○	○	○	○

Visual Aids - Does the text have appropriate maps, graphs charts illustrations/ Are graphs, illustrations and pictures represented clearly? Are the materials of high artistic and literary quality? *

1	2	3	4	5
○	○	○	○	○

Intellectual Stimulation - Does the text promote critical thinking? Are the activities and assignments intellectually stimulating, engaging, and appropriate? Is there a provision of different points of view to foster critical thinking? *

1	2	3	4	5
○	○	○	○	○

Format - Does the textbook present an attractive, interesting format? Does the material promote visual literacy? *

1	2	3	4	5
○	○	○	○	○

Curriculum Alignment - Does the text match our grade level objectives and the scope and sequence of skills? Is the material covered in depth? Is it factual and reliable? *

1	2	3	4	5
○	○	○	○	○

Assessment - Are tests, assessments included and appropriate? Are examples of open-ended and performance assessments included? *

1	2	3	4	5
○	○	○	○	○

Affirmative Action- Does the text represent the diverse population in our country? Is it balanced in coverage of minorities and women? Does it represent a realistic picture of events and people? Are there any sections that present fragmented and isolated information on minorities and women? Does the material use inclusionary language that is non-existent? Is the test free from cultural and sex bias? Is there an avoidance of discrimination as to race color, creed, religion, gender, ancestry, national, origin, or social economic status? *

1	2	3	4	5
○	○	○	○	○

Content- Is the material covered in depth? Is it up to date? Is it applicable to our students? Is it aligned to current national and state standards? Does the material provide for a wide range of levels of difficulty with a diversity of appeal? *

1	2	3	4	5
○	○	○	○	○

Resource Material- Are valuable print and non-print materials identified? Are they readily available? *

1	2	3	4	5
○	○	○	○	○

Physical Charateristics - Will the text stand up to hard use? Is the book/text bound well and is the paper good quality? *

1	2	3	4	5
○	○	○	○	○

Teacher Edition - Is there a teacher edition? Does it provide valuable assistance? Is it a comprehensive guide? Are the materials clear and useful? *

1	2	3	4	5
○	○	○	○	○

Does the text use technology as an educational tool? *

1	2	3	4	5
○	○	○	○	○

Does the text have an online version? *

- ○ Yes
- ○ No

What is the Lexile level of the text? *

Your answer

What are the outstanding features of the text? *

Your answer

What are the shortcomings of the text? *

Your answer

Should the textbook be adopted? *

- ○ Yes
- ○ No

What are the digital resources provided - check all that apply:

- [ ] Digital link to textbook
- [ ] Digital link to additional resources beyond textbook
- [ ] Digital resources for students, teachers and parents
- [ ] Vendor website linked to content
- [ ] None- does not meet federal requirements

Additional Comments:

Your answer

SUBMIT

Appendix Q: Educational Technology Resource Review

Educational App Review

* Required

Requester: *

Your answer

Date of submission: *

Date

mm/dd/yyyy

Content Area Requested for: (check all that apply) *

- [ ] General Education (all content areas)
- [ ] Mathematics
- [ ] English
- [ ] Science
- [ ] Social Studies
- [ ] Health/ Physical Education
- [ ] ELL
- [ ] SPED
- [ ] World Languages
- [ ] Bioscience & Environmental Technology
- [ ] Carpentry

- [ ] Electrical
- [ ] Facilities Mgmnt
- [ ] HVAC
- [ ] Masonry
- [ ] Plumbing/ Plumbing & Heating/ Plumbing Heating and Cooling
- [ ] Sustainable Arcitechture
- [ ] Digital Media
- [ ] Sound Production
- [ ] Bio- Technology
- [ ] Health Technology
- [ ] Culinary Arts
- [ ] Hospitality
- [ ] Early Childhood
- [ ] Hair Dressing & Cosmetology
- [ ] Electronics Technology
- [ ] Graphics Technology
- [ ] Information Systems
- [ ] Automated Manufacturing
- [ ] Mechatronics
- [ ] Precision Machining

APP (Company Name) example- Apple, Google *

Your answer

Main purpose of this app? *

Your answer

Company Contact (if known)

Your answer

Is this APP aligned to state and national standards? *

Choose

Engagement: *

Choose

Levels of difficulty: *

Choose

Meeting student's needs: *

Choose

Platform matches school equipment: *

Choose

Research- Based: *

Choose

Scholastic Presentation: *

Choose

Self correcting: *

Choose

Can the information from the App be sent to teachers, students, or parents via email?

- ○ Yes
- ○ No

Modes of play: *

- ☐ App allows multiple players, as well as, multiple levels simultaneously
- ☐ App may only be used with a group
- ☐ Single player only
- ☐ The students can work collaboratively
- ☐ Other: _____

Does this app address more than one learning style? (audio, visual, kinesthetic) *

- ○ Yes
- ○ No

Does this app require the use of personally identifiable student information? *

- ○ Yes
- ○ No

If yes, then does the vendor have a current Data privacy agreement with the CTHSS? (all app approvals require CTHSS to obtain one) *

- ○ Yes
- ○ No
- ○ I don't know, and need further information

SUBMIT

Appendix R: Technology Budget Detail

Building Based Technology Hardware - NON- Trade Technology 2019-2020

		QTY	Price	Total
Technology Services				$ -
				$ -
Central Office and School Admin Needs				$ -
				$ -
Central Office Laptops		25	$ 1,800.00	$ 45,000.00
School Admin Desktops	5*20	100	$ 900.00	$ 90,000.00
Central Office Desktops		30	$ 900.00	$ 27,000.00
Guidance/Social Worker/Psychologist laptops	4*18	72	$ 1,000.00	$ 72,000.00
School Admin Laptops		15	$ 1,000.00	$ 15,000.00
				$ -
				$ -
New Teacher Chrome book				$ -
		125	$ 287.00	$ 35,875.00
				$ -
Library Media - for Building Wide Distribution (Staff and Students)				$ -
Laptop		34	$ 900.00	$ 30,600.00
Tripods		17	$ 350.00	$ 5,950.00
				$ -
Tablet for Circulation/Student		68	$ 320.00	$ 21,760.00
Carry Cases for devices		68	$ 18.00	$ 1,224.00
Digital Cameras- Go Pros		68	$ 350.00	$ 23,800.00
				$ -
One to one Roll out				
Phase In Deployment				
District Incoming enrollment for Grade 9		3000	$ 278.00	$ 834,000.00
instructional Staff		300	$ 278.00	$ 83,400.00
Library Media				$ -
Computers		100	$ 900.00	$ 90,000.00
				$ -
Art				$ -
Computers	17 locations * 4	68	$ 1,300.00	$ 88,400.00
Tablets	17 locations * 4	68	$ 160.00	$ 10,880.00
				$ -
Building Items				$ -
Digital Classroom				$ -
Smartboard w/install (repair)		25	$ 6,400.00	$ 160,000.00
Smartboard w/install		150	$ 8,400.00	$ 1,260,000.00
Academic PC's - Including Comp Ed		1000	$ 900.00	$ 900,000.00
DVD Drives for desktops		300	$ 65.00	$ 19,500.00
Document Cameras		50	$ 900.00	$ 45,000.00
Black White Laser	18*5	80	$ 650.00	$ 52,000.00
Color Laser	18*5	80	$ 650.00	$ 52,000.00
Color laser- Large Format		18	$ 1,450.00	$ 26,100.00
Hard Drive Duplicator (IT)		10	$ 3,200.00	$ 32,000.00
Digital Displays		10	$ 9,800.00	$ 98,000.00
3d Printers		17	$ 5,400.00	$ 91,800.00
Network Switches	All but Grasso, Prince, Norwich and Cheney	15	$ 220,000.00	$ 3,300,000.00
Network Servers- all locations		20	$ 10,000.00	$ 200,000.00
Tricaster	Platt, Goodwin	2	$ 30,000.00	$ 60,000.00
				$ -
WAPS Replacement	All District locations	21	$ 125,000.00	$ 2,625,000.00
				$ -
VBrick				
Update	Abbott, Prince, Goodwin, Norwich, Cheney	5	$ 80,000.00	$ 400,000.00
Data Wiring				
Misc.		1	$ 125,000.00	$ 125,000.00

Large Instruction Areas (Tiered Lecture Hall)					
BHT	TLH	2	$ 65,000.00	$ 130,000.00	
Vinal	TLH	1	$ 65,000.00	$ 65,000.00	
Windham	TLH	1	$ 65,000.00	$ 65,000.00	
				$ -	
					$ 10,932,289.00

Technology Hardware - Trade Technologies -2019-2020

Criminal Justice- 1 trade - 2 locations

Criminal Justice - Locations 2		QTY	Amount	Total	
Computers		72	$ 1,200.00	$ 86,400.00	
Digital Camera		18	$ 450.00	$ 8,100.00	
Color Laser Printer (Large format)		4	$ 900.00	$ 3,600.00	
				$ -	

Marketing, Sales & Service Cluster: 1 Trade / 2 Location

Marketing Management - locations 2					
Computers		40	$ 900.00	$ 36,000.00	
Digital Camera		5	$ 450.00	$ 2,250.00	
Color Laser Printer (Large format)		5	$ 1,500.00	$ 7,500.00	

Human Services Cluster: 1 Trade / 15 Locations

Hair Dressing - locations 15					
Computers		56	$ 750.00	$ 42,000.00	
Digital Camera		28	$ 4,400.00	$ 123,200.00	
Color laser Printer		28	$ 800.00	$ 22,400.00	

Law, Security and Safety -1 Trade -2 locations

Computers		40	$ 900.00	$ 36,000.00	
Digital Camera		5	$ 450.00	$ 2,250.00	
Color Laser Printer (Large format)		5	$ 1,500.00	$ 7,500.00	
Drones		8	$ 1,500.00	$ 12,000.00	
Command Center Console		4	$ 8,000.00	$ 32,000.00	

Architecture and Construction Cluster: 8 Trade / 67 Locations

Carpentry - locations 17					
Computers	17*10	170	$ 900.00	$ 153,000.00	
Electrical - location 17					
Computers	17*10	170	$ 900.00	$ 153,000.00	
HVAC - locations 11					
Computers	11*10	110	$ 900.00	$ 99,000.00	
Masonry - locations 3					
Sustainable Architecture - locations 2					
Computers	2 * 22	44	$ 1,500.00	$ 66,000.00	
Color Printer -Large Format	4	4	$ 5,600.00	$ 22,400.00	
Facilities Management - locations 1					
Plumbing and Heating - locations 13					
Computers	13*10	130	$ 900.00	$ 117,000.00	
Plumbing Heating and Cooling - locations 1					

Manufacturing Cluster: 5 Trades / 29 Locations

CADD - locations 11					
Computers	11 * 22	0	$ 1,500.00	$ -	
Color Printer -Large Format	11	0	$ 5,600.00	$ -	
ElectroMech - locations 2					
Computers	2 * 22	0	$ 1,500.00	$ -	
Manufacturing Technology - locations 13					
Computers	13 * 22	0	$ 1,500.00	$ -	
Color Printer -Large Format		0	$ 5,600.00	$ -	
Welding and Metal Fabrication- locations 2					
Automated Manufacturing Tecnology - locations 1				$ -	

Transportation, Distribution & Logistics Cluster: 3 Trades / 28 Locations

Automotive Collision Repair and Refinishing- locations 9						
Computers	9*10		90	$ 900.00	$	81,000.00
Automotive Technology - locations 18						
Computers	9*10		90	$ 900.00	$	81,000.00
Shop Tablets	18*3		54	$ 900.00	$	48,600.00
Diesel and Heavy Equipment Repair - locations 1						
Computers			10	$ 900.00	$	9,000.00

Information Technology Cluster: 3 Trades / 25 Locations

Electronics Technology -locations 7						
Computers	7*22		154	$ 900.00	$	138,600.00
Graphics Technology - locations 7						
Computers -PC	7*22		154	$ 1,500.00	$	231,000.00
Large format Printers		7	7	$ 6,400.00	$	44,800.00
Tablets	5*7		35	$ 900.00	$	31,500.00
MAC Desktops	7*22		165	$ 1,800.00	$	297,000.00
Information Systems Technology - locations 12						
Computers	12*22		264	$ 1,500.00	$	396,000.00
File Server			12	$ 10,000.00	$	120,000.00
Router -instruction			12	$ 10,000.00	$	120,000.00
NAO- STEM Robot			12	$ 9,000.00	$	108,000.00
Digital Cameras			24	$ 450.00	$	10,800.00
Tablet	10*5		50	$ 900.00	$	45,000.00
3D Printers		12	12	$ 5,000.00	$	60,000.00

Agriculture, Food & Natural Resources Cluster: 2 Trades / 2 Locations

Bio Science Technology - locations 2						
Computers	2*22		44	$ 900.00	$	39,600.00
Bio Environmental Technology - locations 2						
Computers	2*22		44	$ 900.00	$	39,600.00

Arts, Audio/Visual Technology & Commuc. Cluster: 2 Trades / 3 Locations

Digital Media - locations 2						
Computers	2*22		44	$ 900.00	$	39,600.00
Computers/MAC	2*22		44	$ 1,800.00	$	79,200.00
Wacom Tablets	2*22		44	$ 250.00	$	11,000.00
Sounds Production Technology - locations 1						
Computers			22	$ 1,500.00	$	33,000.00
Computers/MAC			22	$ 1,800.00	$	39,600.00

Health Science Cluster: 1 Trade / 8 Locations

Health Technology - locations 10						
Computers	10*22		220	$ 900.00	$	198,000.00

Adult Programs

Aviation - locations 2						
Computers	10*2		20	$ 900.00	$	18,000.00
Chromebooks	50*2		100	$ 278.00	$	27,800.00
						$ 3,379,300.00

Building Based Technology Hardware - NON- Trade Technology 2020-2021

		QTY	Price	Total	
Technology Services					
Central Office and School Admin Needs				$ -	
				$ -	
Central Office Laptops		25	$ 1,800.00	$ 45,000.00	
School Admin Deskt 5*20		100	$ 900.00	$ 90,000.00	
Central Office Desktops		30	$ 900.00	$ 27,000.00	
Guidance/Social Worker/ Psychologist laptops	4*18	72	$ 1,000.00	$ 72,000.00	
School Admin Laptops		15	$ 1,000.00	$ 15,000.00	
				$ -	
				$ -	
New Teacher Chrome book				$ -	
		125	$ 287.00	$ 35,875.00	
				$ -	
Library Media - for Building Wide Distribution (Staff and Students)				$ -	
				$ -	
				$ -	
One to one Roll out					
Phase In Deployment					
District Incoming enrollment for Grade 9		3000	$ 278.00	$ 834,000.00	
Instructional Staff		300	$ 278.00	$ 83,400.00	
Library Media				$ -	
Computers	17 locations (8*25)	200	$ 900.00	$ 180,000.00	
				$ -	
Art				$ -	
Computers	17 locations * 4	68	$ 1,300.00	$ 88,400.00	
Tablets	17 locations * 4	68	$ 160.00	$ 10,880.00	
				$ -	
Building Items				$ -	
Digital Classroom				$ -	
	Smartboard w/install - Al Prince	10	$ 8,400.00	$ 84,000.00	
Academic PC's - Including Comp Ed		300	$ 900.00	$ 270,000.00	
DVD Drives for desktops		150	$ 65.00	$ 9,750.00	
Black White Laser	18*5	80	$ 650.00	$ 52,000.00	
Color Laser	18*5	80	$ 650.00	$ 52,000.00	
Color laser- Large Format		18	$ 1,450.00	$ 26,100.00	
Digital Displays		5	$ 9,800.00	$ 49,000.00	
3d Printers		68	$ 5,400.00	$ 367,200.00	
Network Switches		20	$ 45,000.00	$ 900,000.00	
WAP/Controller		1	$ 900,000.00	$ 900,000.00	
Data Wiring					
Misc.		1	$ 50,000.00	$ 50,000.00	
					$ 4,241,605.00

Technology Hardware - Trade Technologies -2020-2021

Hospitality & Tourism Cluster: 2 Trade 19 Locations

Culinary - Locations 18	QTY	Amount	Total
			$ -

Marketing, Sales & Service Cluster: 2 Trade / 5 Location

Marketing Management - locations 2

Human Services Cluster: 2 Trade / 15 Locations

Hair Dressing - locations 14

Law, Security and Safety -1 Trade -2 locations

Criminal Justice- 2 locations					
Computers			$ 900.00	$	-
Digital Camera			$ 450.00	$	-
Color Laser Printer (Large format)			$ 1,500.00	$	-
Drones			$ 1,500.00	$	-
Command Center Console			$ 8,000.00	$	-

Architecture and Construction Cluster: 8 Trade / 67 Locations

Carpentry - locations 17					
Electrical - location 17					
HVAC - locations 11					
Masonry - locations 3					
Computers	3*10	30	$ 900.00	$	27,000.00
Sustainable Architecture - locations 2					
Plumbing and Heating - locations 13					
Plumbing Heating and Cooling - locations 1					
Computers		10	$ 900.00		

Manufacturing Cluster: 5 Trades / 29 Locations

CADD - locations 11					
Computers	11 * 22	222	$ 1,500.00	$	333,000.00
Color Printer -Large	11	11	$ 5,600.00	$	61,600.00
ElectroMech - locations 2					
Computers	2 * 22	44	$ 1,500.00	$	66,000.00
Manufacturing Technology - locations 13					
Computers	13 * 22	286	$ 1,500.00	$	429,000.00
Color Printer -Large Format		13	$ 5,600.00	$	72,800.00
Welding and Metal Fabrication- locations 2					
Computers		10	$ 900.00	$	9,000.00
Automated Manufacturing Tecnology - locations 1				$	-
Computers		22	$ 1,500.00	$	33,000.00

Transportation, Distribution & Logistics Cluster: 3 Trades / 28 Locations

Automotive Collision Repair and Refinishing- locations 9

Automotive Technology - locations 18

Diesel and Heavy Equipment Repair - locations 1

Information Technology Cluster: 3 Trades / 25 Locations

Electronics Technology -locations 7

Computers	7*22		154	$ 900.00	$	138,600.00

Graphics Technology - locations 7

Computers -PC	7*22		154	$ 1,500.00	$	231,000.00
Large format Printers		7	7	$ 6,400.00	$	44,800.00
Tablets	5*7		35	$ 900.00	$	31,500.00
MAC Desktops	7*22		144	$ 1,800.00	$	259,200.00

Information Systems Technology - locations 10

Computers	12*22		264	$ 1,500.00	$	396,000.00
File Server			12	$ 10,000.00	$	120,000.00
Router -instruction			12	$ 10,000.00	$	120,000.00
NAO- STEM Robot			12	$ 9,000.00	$	108,000.00
Digital Cameras			20	$ 450.00	$	9,000.00
Tablet	12*5		60	$ 900.00	$	54,000.00

Agriculture, Food & Natural Resources Cluster: 1 Trade / 2 Locations

Bio Science and Environmental Technology - locations 2

Arts, Audio/Visual Technology & Comm Cluster: 2 Trades / 3 Locations

Digital Media - locations 2

Sounds Production Technology - locations 1

Health Science Cluster: 1 Trade / 8 Locations

Health Technology - locations 8

Adult Programs

Aviation - locations 2

$ 2,543,500.00

Building Based Technology Hardware - NON- Trade Technology 2021-2022

		QTY	Price	Total
Technology Services				
				$ -
Library Media - for Building Wide Distribution (Staff and Students)				$ -
Laptop		34	$ 900.00	$ 30,600.00
3D printer		17	$ 5,500.00	$ 93,500.00
				$ -
Tablet for Circulation/ Staff		34	$ 900.00	$ 30,600.00
Carry Cases for devices		68	$ 99.00	$ 6,732.00
Digital Cameras- Go Pros		68	$ 350.00	$ 23,800.00
				$ -
One to one Roll out				
Phase In Deployment				
District Incoming enrollment for Grade 9		3000	$ 278.00	$ 834,000.00
Instructional Staff		300	$ 278.00	$ 83,400.00
Library Media				$ -
Computers	17 locations (8*25)	200	$ 900.00	$ 180,000.00
				$ -
Art				$ -
Computers	17 locations * 4	68	$ 1,300.00	$ 88,400.00
Tablets	17 locations * 4	68	$ 160.00	$ 10,880.00
				$ -
Building Items				$ -
Digital Classroom				$ -
Smartboard w/install		250	$ 7,800.00	$ 1,950,000.00
Scanners		34	$ 260.00	$ 8,840.00
Academic PC's - Including Comp Ed		300	$ 900.00	$ 270,000.00
DVD Drives for desktops		150	$ 65.00	$ 9,750.00
Document Cameras		100	$ 900.00	$ 90,000.00
Black White Laser	18*5	80	$ 650.00	$ 52,000.00
Color Laser	18*5	80	$ 650.00	$ 52,000.00
Color laser- Large Format		18	$ 1,450.00	$ 26,100.00
Digital Displays		10	$ 9,800.00	$ 98,000.00
3d Printers		68	$ 5,400.00	$ 367,200.00
Network Switches		18	$ 45,000.00	$ 810,000.00
				$ -
WAPS/Controller		1	$ 900,000.00	$ 900,000.00

Data Wiring						
Misc.		1	$ 150,000.00	$	150,000.00	
Large Instruction Areas (Gymnasiums)						
BHT	GYM	1	$ 65,000.00	$	65,000.00	
Vinal	GYM	1	$ 65,000.00	$	65,000.00	
Windham	GYM	1	$ 65,000.00	$	65,000.00	
Wright	GYM	1	$ 65,000.00	$	65,000.00	
						$ 6,425,802.00

Technology Hardware - Trade Technologies -2021-2022

Hospitality & Tourism Cluster: 2 Trade 19 Locations

Culinary - Locations 18	QTY		Amount	Total	
Computers		72	$ 900.00	$	64,800.00
Digital Camera		18	$ 450.00	$	8,100.00
Color Laser Printer (Large format)		18	$ 450.00	$	8,100.00
				$	-
Hotel/Hospitality - locations 1					
Computers	22	22	$ 900.00	$	19,800.00

Marketing, Sales & Service Cluster: 2 Trade / 5 Location

Marketing Management - locations 2

Computers	40	$ 900.00	$	36,000.00
Digital Camera	5	$ 450.00	$	2,250.00
Color Laser Printer (Large format)	5	$ 1,500.00	$	7,500.00

Human Services Cluster: 2 Trade / 15 Locations

Hair Dressing - locations 14

Computers	56	$ 750.00	$	42,000.00
Digital Camera	28	$ 4,400.00	$	123,200.00
Color laser Printer	28	$ 800.00	$	22,400.00

Law, Security and Safety -1 Trade -2 locations

Criminal Justice - 2 locations

Computers	40	$ 900.00	$	36,000.00
Digital Camera	5	$ 450.00	$	2,250.00
Color Laser Printer (Large format)	5	$ 1,500.00	$	7,500.00
Drones	8	$ 1,500.00	$	12,000.00
Command Center Console	4	$ 8,000.00	$	32,000.00

Architecture and Construction Cluster: 8 Trade / 67 Locations

Carpentry - locations 17						
Computers	17*10		170	$ 900.00	$	153,000.00
Electrical - location 17						
Computers	17*10		170	$ 900.00	$	153,000.00
HVAC - locations 11						
Computers	11*10		110	$ 900.00	$	99,000.00
Masonry - locations 3						
Sustainable Architecture - locations 4						
Computers	4 * 22		88	$ 1,500.00	$	132,000.00
Color Printer -Large		4	4	$ 5,600.00	$	22,400.00
Plumbing and Heating - locations 13						
Computers	13*10		130	$ 900.00	$	117,000.00
Plumbing Heating and Cooling - locations 1						

Manufacturing Cluster: 5 Trades / 29 Locations

CADD - locations 11						
Computers	11 * 22		244	$ 1,500.00	$	366,000.00
Color Printer -Large		11	0	$ 5,600.00	$	-
ElectroMech - locations 2						
Computers	2 * 22		0	$ 1,500.00	$	-
Manufacturing Technology - locations 13						
Computers	13 * 22		0	$ 1,500.00	$	-
Color Printer -Large Format			0	$ 5,600.00	$	-
Welding and Metal Fabrication- locations 2						
Automated Manufacturing Tecnology - locations 1					$	-

Transportation, Distribution & Logistics Cluster: 3 Trades / 28 Locations

Automotive Collision Repair and Refinishing- locations 9						
Computers	9*10		90	$ 900.00	$	81,000.00
Automotive Technology - locations 18						
Computers	9*10		90	$ 900.00	$	81,000.00
Shop Tablets	18*3		54	$ 900.00	$	48,600.00
Diesel and Heavy Equipment Repair - locations 1						
Computers			10	$ 900.00	$	9,000.00

Information Technology Cluster: 3 Trades / 25 Locations

Electronics Technology -locations 8

Computers	8*22	0	$ 900.00	$	-

Graphics Technology - locations 7

Computers -PC	7*22	0	$ 1,500.00	$	-
Large format Printers	7	0	$ 6,400.00	$	-
Tablets	5*7	0	$ 900.00	$	-
MAC Desktops	7*10	0	$ 1,800.00	$	-

Information Systems Technology - locations 10

Computers	10*22	0	$ 1,500.00	$	-
File Server		0	$ 10,000.00	$	-
Router -instruction		0	$ 10,000.00	$	-
NAO- STEM Robot		0	$ 25,000.00	$	-
Digital Cameras		0	$ 450.00	$	-
Tablet	10*5	0	$ 900.00	$	-

Agriculture, Food & Natural Resources Cluster: 1 Trade / 2 Locations

Bio Science and Environmental Technology - locations 2

Computers	2*22	44	$ 900.00	$	39,600.00

Arts, Audio/Visual Technology and Communications Cluster: 2 Trades / 3 Locations

Digital Media - locations 2

Computers	2*22	44	$ 900.00	$	39,600.00
Computers/MAC	2*22	44	$ 1,800.00	$	79,200.00
Wacom Tablets	2*22	44	$ 250.00	$	11,000.00

Sounds Production Technology - locations 1

Computers		22	$ 900.00	$	19,800.00
Computers/MAC		22	$ 1,800.00	$	39,600.00

Health Science Cluster: 1 Trade / 8 Locations

Health Technology - locations 8

Computers	8*22	176	$ 900.00	$	158,400.00

Adult Programs

Aviation - locations 2

Computers	10*2	20	$ 900.00	$	18,000.00

$ 2,091,100.00

Building Based Technology Hardware - NON- Trade Technology 2022-23

		QTY	Price	Total	
Technology Services					
TIPS					
Laptop		34	$ 1,100.00	$ 37,400.00	
				$ -	
Library Media - for Building Wide Distribution (Staff and Students)				$ -	
Laptop		34	$ 900.00	$ 30,600.00	
				$ -	
One to one Roll out					
Phase In Deployment					
District Incoming enrollment for Grade 9		3000	$ 278.00	$ 834,000.00	
Instructional Staff		300	$ 278.00	$ 83,400.00	
Library Media				$ -	
Computers	17 locations (8*25)	200	$ 900.00	$ 180,000.00	
Security System		3	$ 9,000.00	$ 27,000.00	
				$ -	
Art				$ -	
Computers	17 locations * 4	68	$ 1,300.00	$ 88,400.00	
Tablets	17 locations * 4	68	$ 160.00	$ 10,880.00	
				$ -	
Building Items				$ -	
Digital Classroom				$ -	
Smartboard w/install		5	$ 6,400.00	$ 32,000.00	
Scanners		34	$ 260.00	$ 8,840.00	
Academic PC's - Including Comp Ed		300	$ 900.00	$ 270,000.00	
DVD Drives for desktops		150	$ 65.00	$ 9,750.00	
Black White Laser	18*5	80	$ 650.00	$ 52,000.00	
Color Laser	18*5	80	$ 650.00	$ 52,000.00	
Color laser- Large Format		18	$ 1,450.00	$ 26,100.00	
Digital Displays		5	$ 9,800.00	$ 49,000.00	
3d Printers		68	$ 5,400.00	$ 367,200.00	
Network Switches		20	$ 45,000.00	$ 900,000.00	
School Servers		20	$ 10,000.00	$ 200,000.00	
WAPS/Controllers		1	$ 900,000.00	$ 900,000.00	
Data Wiring					
Windham		1	$ 100,000.00	$ 100,000.00	
Platt		1	$ 100,000.00	$ 100,000.00	
Vinal		1	$ 100,000.00	$ 100,000.00	
Misc.		1	$ 50,000.00	$ 50,000.00	
					$ 4,508,570.00

Trade Technologies 2022-2023

Hospitality & Tourism Cluster: 2 Trade 19 Locations

Culinary - Locations 18		QTY	Amount	Total	
				$	-
Hotel/Hospitality - locations 2					

Marketing, Sales & Service Cluster: 2 Trade / 14 Locations

Marketing Management - locations 2

Human Services Cluster: 2 Trade / 15 Locations

Hair Dressing - locations 14

Law, Security and Safety -1 Trade -2 locations

Criminal Justice -location 2

Architecture and Construction Cluster: 8 Trade / 67 Locations

Carpentry - locations 17					
Electrical - location 17					
HVAC - locations 11					
Masonry - locations 3					
Computers	3*10	30	$ 900.00	$	27,000.00
Sustainable Architecture - locations 4					
Facilities Management - locations 1					
Computers		20	$ 900.00	$	18,000.00
Tablets		10	$ 900.00	$	9,000.00
Plumbing and Heating - locations 13					
Plumbing Heating and Cooling - locations 1					
Computers		20	$ 900.00	$	18,000.00

Manufacturing Cluster: 5 Trades / 29 Locations

CADD - locations 11					
Computers	11 * 22	222	$ 1,500.00	$	333,000.00
Color Printer -Large	11	11	$ 5,600.00	$	61,600.00
ElectroMech - locations 2					
Computers	2 * 22	44	$ 1,500.00	$	66,000.00
Manufacturing Technology - locations 13					
Computers	13 * 22	286	$ 1,500.00	$	429,000.00
Color Printer -Large Format		13	$ 5,600.00	$	72,800.00
Welding and Metal Fabrication- locations 2					
Computers		20	$ 900.00	$	18,000.00
Automated Manufacturing Tecnology - locations 1				$	-
Computers		22	$ 1,500.00	$	33,000.00

Transportation, Distribution & Logistics Cluster: 3 Trades / 28 Locations

Automotive Collision Repair and Refinishing- locations 9

Automotive Technology - locations 18

Diesel and Heavy Equipment Repair - locations 1

Information Technology Cluster: 3 Trades / 25 Locations

Electronics Technology -locations 8					
Computers	8*22	176	$ 900.00	$	158,400.00
Graphics Technology - locations 7					
Computers -PC	7*22	154	$ 1,500.00	$	231,000.00
Large format Printers	7	7	$ 6,400.00	$	44,800.00
Tablets	5*7	35	$ 900.00	$	31,500.00
MAC Desktops	7*10	70	$ 1,800.00	$	126,000.00
Information Systems Technology - locations 10					
Computers	10*22	220	$ 1,500.00	$	330,000.00
File Server		10	$ 10,000.00	$	100,000.00
Router -instruction		10	$ 10,000.00	$	100,000.00
NAO- STEM Robot		10	$ 25,000.00	$	250,000.00
Digital Cameras		20	$ 450.00	$	9,000.00
Tablet	10*5	50	$ 900.00	$	45,000.00

Agriculture, Food & Natural Resources Cluster: 1 Trade / 2 Locations

Bio Science and Environmental Technology - locations 2

Arts, Audio/Visual Technology & Communic. Cluster: 2 Trades / 3 Locations

Digital Media - locations 2

Sounds Production Technology - locations 1

Health Science Cluster: 1 Trade / 8 Locations

Health Technology - locations 8

Adult Programs

Aviation - locations 2

$	**2,511,100.00**