



# Applied Technology I

## *Course Description*

*Our Applied Technology pathway is based on the same curriculum that is being taught at the college level, allowing students who meet the criteria to enroll as part of the dual enrollment program with PCCC. ALL students in either the standard or dual enrollment programs, who complete the 10<sup>th</sup> & 11<sup>th</sup> grade pathways are eligible to sit for the COMTIA A+ certification exam. This program is designed for students in 11<sup>th</sup> grade.*

**Information Technology Fundamentals and Applications-** This course provides IT students with an introduction to information technology fundamentals encompassing both hardware and software. An emphasis is placed on the system unit components, peripheral devices, and systems and applications software. Topics include CPU, RAM, machine cycle, data representations, number systems, operating system characteristics, utility programs, language translators, communication devices, media and networks. Students learn how to: efficiently search the Internet for information, use Microsoft Windows, and use Microsoft productivity software.

**Software and hardware maintenance and diagnostics-** This course provides students with the knowledge and skills necessary to install, troubleshoot, and upgrade software and hardware components, and to maintain and replace parts for PCs. Students learn how to properly handle system components, use hardware and software diagnostic tools to troubleshoot problems, and fix or replace the failed components. Proper techniques to assemble and disassemble a microcomputer system are also covered. Successful completion of this course prepares students

to take the CompTIA (Computing Technology Industrial Association) A+ certification exam and Microsoft Technology Associate (MTA) exam.

This course will build upon students' existing user-level knowledge and experience with personal computer software and hardware in order to present fundamental concepts and techniques that technicians will use every day on the job. Upon completing this course, students will gain the essential skills and technical expertise necessary to install, upgrade, configure, troubleshoot, optimize, repair and perform preventative maintenance on basic personal computer hardware and operating systems.

This course provides students with the basic knowledge and skills necessary for a career in PC support. The course is designed to fully prepare students to sit for and pass the CompTIA A+ 220-901 and 220-902 certification exams. The exam covers a broad range of hardware and software technologies that is not tied to any specific vendor products. Examinees must successfully complete 2 parts for the exam – Essentials and Practical Applications modules. Provided both modules are passed within a 90 day period, successful candidates will receive CompTIA A+ Certification. Course topics include installation, configuration, preventative maintenance of PC hardware components, and the basics of networking, security, virtualization, desktop imaging, and deployment. Students will also gain knowledge of diagnostic and troubleshooting processes for various types of technical issues.

***\* it should be noted that students who do not successfully complete classes 107 and 116 cannot go on to classes 160 & 180 as part of the dual enrollment program.***

## Applied Technology I

Pacing Guide		
Unit	Topic	Suggested Timing
Unit 1	Information Technology and the IT Professional	approx. 7 weeks
Unit 2	The PC and its Peripherals	approx. 10 weeks
Unit 3	Mobile Devices, Networking and Security	approx. 8 weeks
Unit 4	System Implementation and Maintenance	approx. 10 weeks

## Educational Technology Standards

8.1.12.A.1, 8.1.12.A.3, 8.1.12.B.2, 8.1.12.C.1, 8.1.12.D.2, 8.2.12.A.2, 8.2.12.B.2, 8.2.12.C.3

➤ **Technology Operations and Concepts**

- Create a personal digital portfolio which reflects personal and academic interests, achievements, and career aspirations by using a variety of digital tools and resources.  
Collaborate in online courses, learning communities, social networks or virtual worlds to discuss a resolution to a problem or issue.

➤ **Creativity and Innovation**

Apply previous content knowledge by creating and piloting a digital learning game or tutorial

➤ **Communication and Collaboration**

- Develop an innovative solution to a real world problem or issue in collaboration with peers and experts, and present ideas for feedback through social media or in an online community.

➤ **Digital Citizenship**

- Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.
- Evaluate consequences of unauthorized electronic access (e.g. hacking)

➤ **Critical Thinking, Problem Solving, Decision Making**

- Evaluate the strengths and limitations of emerging technologies and their impact on educational, career, personal and or social needs.

## Career Ready Practices

*Career Ready Practices describe the career-ready skills that all educators in all content areas should seek to develop in their students. They are practices that have been linked to increase college, career, and life success. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.*

### **CRP1. Act as a responsible and contributing citizen and employee**

Career-ready individuals understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.

### **CRP2. Apply appropriate academic and technical skills.**

Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.

### **CRP3. Attend to personal health and financial well-being.**

Career-ready individuals understand the relationship between personal health, workplace performance and personal well-being; they act on that understanding to regularly practice healthy diet, exercise and mental health activities. Career-ready individuals also take regular action to contribute to their personal financial well-being, understanding that personal financial security provides the peace of mind required to contribute more fully to their own career success.

### **CRP4. Communicate clearly and effectively and with reason.**

Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. They communicate in the workplace with clarity and purpose to make maximum use of their own and others' time. They are excellent writers; they master conventions, word choice, and organization, and use effective tone and presentation skills to articulate ideas. They are skilled at interacting with others; they are active listeners and speak clearly and with purpose. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome.

**CRP5. Consider the environmental, social and economic impacts of decisions.**

Career-ready individuals understand the interrelated nature of their actions and regularly make decisions that positively impact and/or mitigate negative impact on other people, organization, and the environment. They are aware of and utilize new technologies, understandings, procedures, materials, and regulations affecting the nature of their work as it relates to the impact on the social condition, the environment and the profitability of the organization.

**CRP6. Demonstrate creativity and innovation.**

Career-ready individuals regularly think of ideas that solve problems in new and different ways, and they contribute those ideas in a useful and productive manner to improve their organization. They can consider unconventional ideas and suggestions as solutions to issues, tasks or problems, and they discern which ideas and suggestions will add greatest value. They seek new methods, practices, and ideas from a variety of sources and seek to apply those ideas to their own workplace. They take action on their ideas and understand how to bring innovation to an organization.

**CRP7. Employ valid and reliable research strategies.**

Career-ready individuals are discerning in accepting and using new information to make decisions, change practices or inform strategies. They use reliable research process to search for new information. They evaluate the validity of sources when considering the use and adoption of external information or practices in their workplace situation.

**CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.**

Career-ready individuals readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem. They are aware of problems when they occur and take action quickly to address the problem; they thoughtfully investigate the root cause of the problem prior to introducing solutions. They carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.

**CRP9. Model integrity, ethical leadership and effective management.**

Career-ready individuals consistently act in ways that align personal and community-held ideals and principles while employing strategies to positively influence others in the workplace. They have a clear understanding of integrity and act on this understanding in every decision. They use a variety of means to positively impact the directions and actions of a team or organization, and they apply insights into human behavior to change others' action, attitudes and/or beliefs. They recognize the near-term and long-term

effects that management's actions and attitudes can have on productivity, morals and organizational culture.

**CRP10. Plan education and career paths aligned to personal goals.**

Career-ready individuals take personal ownership of their own education and career goals, and they regularly act on a plan to attain these goals. They understand their own career interests, preferences, goals, and requirements. They have perspective regarding the pathways available to them and the time, effort, experience and other requirements to pursue each, including a path of entrepreneurship. They recognize the value of each step in the education and experiential process, and they recognize that nearly all career paths require ongoing education and experience. They seek counselors, mentors, and other experts to assist in the planning and execution of career and personal goals.

**CRP11. Use technology to enhance productivity.**

Career-ready individuals find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring new technology. They are proficient with ubiquitous technology applications. They understand the inherent risks-personal and organizational-of technology applications, and they take actions to prevent or mitigate these risks.

**CRP12. Work productively in teams while using cultural global competence.**

Career-ready individuals positively contribute to every team, whether formal or informal. They apply an awareness of cultural difference to avoid barriers to productive and positive interaction. They find ways to increase the engagement and contribution of all team members. They plan and facilitate effective team meetings.

## Differentiated Instruction

### Strategies to Accommodate Students Based on Individual Needs

<u>Time/General</u>	<u>Processing</u>	<u>Comprehension</u>	<u>Recall</u>
<ul style="list-style-type: none"> <li>• Extra time for assigned tasks</li> <li>• Adjust length of assignment</li> <li>• Timeline with due dates for reports and projects</li> <li>• Communication system between home and school</li> <li>• Provide lecture notes/outline/copies of slides</li> </ul>	<ul style="list-style-type: none"> <li>• Extra Response time</li> <li>• Have students verbalize steps</li> <li>• Repeat, clarify or reword directions</li> <li>• Mini-breaks between tasks</li> <li>• Provide a warning for transitions</li> <li>• Reading partners</li> </ul>	<ul style="list-style-type: none"> <li>• Precise step-by-step directions</li> <li>• Short manageable tasks</li> <li>• Brief and concrete directions</li> <li>• Provide immediate feedback</li> <li>• Small group instruction</li> <li>• Emphasize multi-sensory learning</li> </ul>	<ul style="list-style-type: none"> <li>• Teacher-made checklist</li> <li>• Use visual graphic organizers</li> <li>• Reference resources to promote independence</li> <li>• Visual and verbal reminders</li> <li>• Online or hardcopy study cards for practice</li> </ul>
<u>Assistive Technology</u>	<u>Tests/Quizzes/Grading</u>	<u>Behavior/Attention</u>	<u>Organization</u>
<ul style="list-style-type: none"> <li>• Computer/whiteboard</li> <li>• iPad/Kindle</li> <li>• Spell-checker</li> <li>• Online videos</li> </ul>	<ul style="list-style-type: none"> <li>• Extended time</li> <li>• Study guides</li> <li>• Shortened tests</li> <li>• Read directions aloud</li> </ul>	<ul style="list-style-type: none"> <li>• Consistent daily structured routine</li> <li>• Simple and clear classroom rules</li> <li>• Frequent feedback</li> </ul>	<ul style="list-style-type: none"> <li>• Individual daily planner</li> <li>• Display a written agenda</li> <li>• Note-taking assistance</li> <li>• Color code materials</li> </ul>

## Enrichment

### **Strategies Used to Accommodate Based on Students Individual Needs:**

- Adaption of Material and Requirements
- Evaluate Vocabulary
- Elevated Text Complexity
- Additional Projects
- Independent Student Options
- Projects completed individual or with Partners
- Self Selection of Research
- Tiered/Multilevel Activities
- Learning Centers
- Individual Response Board
- Independent Book Studies
- Open-ended activities
- Community/Subject expert mentorships

## Assessments

### Suggested Formative/Summative Classroom Assessments

- Timelines, Charts, Graphic Organizers
- Teacher-created Unit Assessments, Chapter Assessments, Quizzes
- Teacher-created DBQs, Essays, Short Answer
- Accountable Talk, Debate, Oral Report, Role Playing, Think Pair, and Share
- Projects, Portfolio, Presentations, Prezi, Gallery Walks
- Homework
- Concept Mapping
- Primary and Secondary Source analysis
- Identify component of a generic Personal Computer
- Evaluate and suggest repairs to a simple computer problem
- Demonstrate proper startup and shutdown procedures for a generic Personal Computer
- Convert binary code to ascii code using conversion table

## Interdisciplinary Connections

### English Language Arts

- Question the accuracy and relevance of information
- Incorporate a variety of visual aids in publication
- Build vocabulary by reading a variety of grade-level texts and apply new vocabulary
- Keep a running word wall of industry vocabulary

### Social Studies

- Research the history of a given industry/profession
- Research prominent historical individuals in a given industry/profession
- Understand how key events, people and ideas contributed to United States History

### World Language

- Translate industry-content
- Create a translated index of industry vocabulary
- Generate a translated list of words and phrases related to workplace safety
- Learn the language of technology as the universal language

### Math

- Interpret a graphical representation of a real-world situation
- Convert from binary to digital
- Track and track various data, such as industry's impact on the GDP, career opportunities or among of individuals currently occupying careers

### Fine & Performing Arts

- Create a poster recruiting young people to focus their studies on a specific career or industry
- Design a flag or logo to represent a given career field

### Science

- Identify ways in which technology has influenced the course of history and improved the quality of life
- Research latest developments in industry technology
- Explain how designing and implementing technology requires weighing trade-offs between positive and negative impacts on humans and the environment
- Investigate applicable-careers in STEM fields

## New Jersey Student Learning Standards 9-12

### 8.1–Educational Technology

#### Career Cluster: Applied Technology-1

- 8.1.12.A.1: Create a personal digital portfolio which reflects personal and academic interests, achievements, and career aspiration by using a variety of digital tools and resources
- 8.1.12.A.3: Collaborate in online courses, learning communities, social networks or virtual worlds to discuss a resolution to a problem or issue.
- 8.1.12.B.2: Apply previous content knowledge by creating and piloting a digital learning game or tutorial
- 8.1.12.C.1: Develop an innovative solution to a real world problem or issue in collaboration with peers and experts, and present ideas for feedback through social media or in an online community.
- 8.1.12.D.2: Evaluate consequences of unauthorized electronic access (e.g., hacking)

### 8.2–Technology Education, Engineering, Design, and Computational Thinking-Programming

#### Career Cluster: Applied Technology-1

- 8.2.12.A.2: Analyze a current technology and the resources used, identify to identify trade-offs in terms of availability, cost, desirability and waste
- 8.2.12.B.2:: Evaluate ethical considerations regarding the sustainability of environmental resources that are used for the design, creation and maintenance of a chosen product.
- 8.2.12.C.3: Analyze a product or system for factors such as safety, reliability, economic considerations, quality control, environmental concerns, manufacturability, maintenance and repair, and human factors, engineering (ergonomics).

## Common Core State Standards (CCSS)

### CCSS - English-Language Arts

#### Key Ideas and Details:

- CCSS.ELA-LITERACY.RL.11-12.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.

#### Craft and Structure:

- CCSS.ELA-LITERACY.RL.11-12.4 Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text.

#### Integration of Knowledge and Ideas:

- CCSS.ELA-LITERACY.W.11-12.7 Integrate and evaluate multiple sources of information presented in different media or formats (e.g. visually, quantitatively) as well as in words in order to address a question or solve a problem.

#### Production and Distribution of Writing:

- CCSS.ELA-LITERACY.W.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

## Common Core State Standards (CCSS)

### CCSS - Mathematics

#### Reason quantitatively and use units to solve problems:

- CCSS.MATH.CONTENT.HSN.Q.A.1 Use units as a way to understand problems and to guide the solution of a multi-step problems: choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.

#### Make inferences and justify conclusions from sample surveys, experiments, and observational studies:

- CCSS.MATH.CONTENT.HSS.IC.B.6 Evaluate reports based on data.

#### Create equations that describe numbers or relationships:

- CCSS.MATH.CONTENT.HSA.CED.A.4 Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.

<p><b>Course:</b> Applied Technology I</p> <p><b>Unit: 1-</b> Information Technology and the IT Professional</p> <p><b>Grade Level:</b> 9-12</p>	<p><b>Unit Overview:</b></p> <p>Careers in technology require criteria to show competence and ability to perform at a certain level. This unit will introduce students to a brief history of technology and expectations for student success in a professional approach to hardware technology support. Students will be introduced to computer services and support, provisions of technical assistance and the ability to listen and evaluate problems based on customer input and diagnosis.</p>
<p><b>New Jersey Student Learning Standards (NJSLS):</b> 8.1.12.A.1, 8.1.12.A.3, 8.1.12.B.2, 8.1.12.C1, 8.1.12.C.1,8.1.12.D.2, 8.2.12.A.2, 8.2.12.B.2, 8.2.12.C.3</p>	
<p><b>Common Core State Standards (CCSS):</b> RL.11-12.1; RI.11-12.4; RL.11-12.7; W.11-12.4, HSN.Q.A.1, HSS.IC.B.6, HAS.CED.A.4</p>	

Student Learning Objectives (SLOs)	Essential Questions	Skills & Indicators	Sample Activities	Resources
<p>Students will learn to become IT Professionals by learning appropriate appearance, phone etiquette, effective communications and career safety rules.</p> <p><b>NJSLS:</b> 8.1.12.A.1, 8.1.12.B.2,8.2.12.A.2, 8.2.12.C.3</p> <p><b>CCSS:</b> RL.11-12.1,</p>	<ul style="list-style-type: none"> <li>▪ How do computer professionals present themselves to both employers and clients?</li> <li>▪ How and when is it appropriate to use your phone at work?</li> <li>▪ How do you ask questions, listen professionally and gain essential</li> </ul>	<ul style="list-style-type: none"> <li>• Communicate professionally.</li> <li>▪ Practice appropriate cell phone etiquette</li> <li>▪ Learning to listen and take information under pressure</li> <li>▪ Implement safety measures</li> <li>▪ Describe procedures</li> </ul>	<p><b>Writing Skills</b> Write a short essay based on article on making a great first impression.</p> <p><b>Practice skills</b> Have student groups create scenarios based on professional skills learned to teach the class about correct actions as a professional</p>	<ul style="list-style-type: none"> <li>▪ <b>Making a Great First Impression:</b> <a href="http://www.mindtools.com/commskill/firstImpressions.htm">www.mindtools.com/commskill/firstImpressions.htm</a></li> <li>▪ <b>Top 6 Rules for Using Cell Phones at work.</b> <a href="http://careerplanning.about.com/od/worksurvival/tp/cell_phone.htm">http://careerplanning.about.com/od/worksurvival/tp/cell_phone.htm</a>.</li> </ul>

Student Learning Objectives (SLOs)	Essential Questions	Skills & Indicators	Sample Activities	Resources
RL.11-12.4, W.11-12.7	<p>information?</p> <ul style="list-style-type: none"> <li>• What is required to become a successful PC Support Specialist?</li> <li>▪ What is the importance of ESD safety measures?</li> </ul>	<p>for documenting and reporting environmental hazards to appropriate authorities</p>	<p><b><u>Communicating Effectively</u></b></p> <p>Have students work as partners with one speaking and one writing details. Should be done in 2 minutes or less.</p> <p><b><u>Presentation Skills</u></b></p> <p>Create a presentation that describes safety documents with pictures and videos to demonstrate knowledge.</p>	<ul style="list-style-type: none"> <li>▪ <b>ESD Safety</b>  <a href="https://www.youtube.com/watch?v=EaicuIRib8">https://www.youtube.com/watch?v=EaicuIRib8</a></li> </ul> <p><b>Mike Meyers Guide to Managing and Troubleshooting PC's</b>-McGraw Hill</p>
<p>Students will gain a complete understanding of the most common PC components, installation and maintenance.</p> <p><b>NJSLS:</b> 8.1.12.A.3, 8.1.12.B.2, 8.2.12.C.3</p>	<ul style="list-style-type: none"> <li>• What is Information Technology?</li> <li>• What are the main components of a PC?.</li> <li>• What makes up the computer's operating system and which</li> </ul>	<ul style="list-style-type: none"> <li>▪ Identify the components of a PC.</li> <li>▪ Demonstrate how a PC works.</li> <li>▪ Troubleshoot common PC problems.</li> <li>▪ Determine the future</li> </ul>	<p><b><u>Graphic Organizer</u></b></p> <p>Layout the core components of an operating system and how they interact.</p> <p><b><u>Editorial</u></b></p> <p>Write an article on</p>	<p><b>General Introduction Pearson- Technology in Action</b></p> <p><b>CYBRARY CompTIA A+ online video training</b>  <a href="https://www.cybrary.it/course/comptia-aplus/">https://www.cybrary.it/course/comptia-aplus/</a></p>

Student Learning Objectives (SLOs)	Essential Questions	Skills & Indicators	Sample Activities	Resources
<p><b>CCSS:</b> RL.11-12.1, W.11-12.7, W.11-12.4, HSN.Q.A.1, HSS.IC.B.6</p>	<p>are most often used?</p> <ul style="list-style-type: none"> <li>• What are the key hardware components of any computer?</li> </ul>	<p>of computer technology.</p>	<p>technology in education and the importance of providing technology to urban school students</p> <p><b>Close Reading</b>                      There are many types of printers, what are the advantages / disadvantages of each?                      Create a spreadsheet based on your reading.</p>	<p><b>Online Simulation videos such as</b>  <a href="http://www.totalsem.com/store/total-sims-interactive-simulations-for-comptia-a-certification/">http://www.totalsem.com/store/total-sims-interactive-simulations-for-comptia-a-certification/</a></p>
<p>Students will know all the use of all the common operating system software environments such as Windows, Chrome and Safari and how to troubleshoot problems.</p> <p><b>NJSLS:</b> 8.1.12.A.1, 8.1.12.B.2, 8.2.12.A.2, 8.2.12.B.2, 8.2.12.C.3</p> <p><b>CCSS:</b> RL.11-12.1, RL.11-12.4, W.11-12.4,</p>	<ul style="list-style-type: none"> <li>• What is the difference between and operating System and a web browser?</li> <li>• Why would a user chose one browser over another?</li> <li>• How has having a computer in your home changed the way you communicate with</li> </ul>	<ul style="list-style-type: none"> <li>• Install and update multiple levels of system software</li> <li>• Work with a team to troubleshoot software problems within the OS</li> <li>• Read and comprehend technical software manuals</li> </ul>	<p><b>Multiple Hands-On Activities:</b>                      Install a newer version of an OS and configure for specified needs</p> <p>Set up computer with multiple view preferences</p> <p>Change and install new fonts and cursors</p> <p>Create an installation manual for chosen</p>	<p><b>Mike Meyers Guide to Managing and Troubleshooting PC's-</b>                      McGraw Hill</p> <p><b>CYBRARY CompTIA A+ online video training</b>  <a href="https://www.cybrary.it/course/comptia-aplus/">https://www.cybrary.it/course/comptia-aplus/</a></p> <p><b>How to install a new operating system:</b>  <a href="http://windows.microsoft.com/en-us/windows/installing-">http://windows.microsoft.com/en-us/windows/installing-</a></p>

Student Learning Objectives (SLOs)	Essential Questions	Skills & Indicators	Sample Activities	Resources
HSN.Q.A.1, HSS.IC.B.6	<p>other people?</p> <ul style="list-style-type: none"> <li>Do you think you are a good candidate for online education?</li> </ul>		software product using images and technical writing	<p><a href="#">reinstalling-windows#1TC=windows-7</a></p> <p><b>How to Build a Computer from Scratch:</b>  <a href="http://lifehacker.com/5827928/how-to-build-a-computer-from-scratch-lesson-4-installing-your-operating-system">http://lifehacker.com/5827928/how-to-build-a-computer-from-scratch-lesson-4-installing-your-operating-system</a></p>
<p>Students will learn the history of the internet, how the internet works, the use of internet software tools and internet safety.</p> <p><b>NJSLS:</b> 8.1.12.A.3, 8.1.12.C.1, 8.1.12.D.2</p> <p><b>CCSS:</b> W.11-12.7, W.11-12.4, HSN.Q.A.1, HSS.IC.B.6, HAS.CED.A.4</p>	<ul style="list-style-type: none"> <li>What happens to data that is placed on the internet?</li> <li>How does international conflict affect technology advances?</li> <li>How can we protect students again internet related safety issues?</li> <li>Should students be allowed free</li> </ul>	<ul style="list-style-type: none"> <li>Install a wireless modem and router and connect to the internet</li> <li>Debate with fellow students on the advantages and drawbacks to internet monitoring in school</li> <li>Set up security protocols on a computer system and create</li> </ul>	<p><b>Multiple Hands-On Activities:</b>            Using an online bandwidth meter determine the internet connection speed and suggest changes to the system that might improve performance</p> <p>Create an online poster to teach children about the hazards of internet predators</p>	<p><b>Mike Meyers Guide to Managing and Troubleshooting PC's-</b>            McGraw Hill</p> <p><b>CYBRARY CompTIA A+ online video training</b>  <a href="https://www.cybrary.it/course/comptia-aplus/">https://www.cybrary.it/course/comptia-aplus/</a></p> <p><b>Keep the Internet Open</b>  <a href="http://www.nytimes.com/2012/05/25/opinion/keep">http://www.nytimes.com/2012/05/25/opinion/keep</a></p>

Student Learning Objectives (SLOs)	Essential Questions	Skills & Indicators	Sample Activities	Resources
	<p>use of the internet in school?</p> <ul style="list-style-type: none"> <li>Should the government charge businesses for using the internet and then use the income to pay for schools?</li> </ul>	<p>software authentication systems</p>	<p>Choose 4 technology breakthroughs that have resulted from conflict and present to class</p> <p>Set up a class debate on the advantages and disadvantages of free internet access for all</p>	<p><a href="#">-the-internet-open.html?_r=0</a></p> <p><b>Will the Internet Remain Free?</b>  <a href="http://www.huffingtonpost.com/karl-grossman/internet-freedom_b_2562205.html">http://www.huffingtonpost.com/karl-grossman/internet-freedom_b_2562205.html</a></p> <p><b>Science, Technology and Innovation in the United States</b>  <a href="http://www.nap.edu/read/5850/chapter/6">http://www.nap.edu/read/5850/chapter/6</a></p>

## Unit 1 Vocabulary

application browser cursor driver firewall font hardware home page login peripheral RAM, ROM Scanner USB Wi-Fi Windows World Wide Web, WWW, the Web anti-virus software app bit, bytes	boot, boot up, boot disk browser, to browse bug cache CD-ROM CPU data DOS driver file folder (directory) format graphics card internet gigabytes memory MHz - Megahertz modem operating system (OS)
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## Suggested Unit Projects

*Choose At Least One*

<p>Research child &amp; teen safety and internet usage. Put together a presentation for teens about keeping safe while using social media programs.</p>	<p>Create a survey to give to your fellow students to ask about charging for use of the internet if the proceeds were to go to funding urban school systems. Analyze data and create charts of responses to the questions.</p>
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## Suggested Structured Learning Experiences

<p>The Paterson Police Department          111 Broadway Paterson, NJ 07505          (973) 321-1111  <a href="http://www.patersonpd.com/">http://www.patersonpd.com/</a></p> <p>Paterson Public School District          Dept. of Internet Technology          90 Delaware Ave.          Paterson, NJ          973-321-1000</p>	<p>Microsoft District Office          Computer Training School          101 S Wood Ave #900, Iselin, NJ 08830          Phone :<a href="tel:7326359033">(732) 635-9033</a></p>
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