

## CAREER PREPAREDNESS

<b>Unit</b>	<b>Technology Skill Applications</b>	<b>Time on Task: 5 Hours/300 Minutes</b>
<b>Course Content Standard(s)</b>	8. Diagnose problems with hardware, software, and advanced network systems. Examples: printer, projector, power supply, task manager, network connectivity	

### *College and Career Readiness Standards*

*(Teachers should select the appropriate grade span standard(s) as it pertains to reading and writing.)*

Reading Standards for Literacy in Science and Technical Subjects 6-12 <u>or</u> Reading Standards for Literacy in History/Social Studies 6-12	Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6-12	Standards for Mathematical Practice
2., 4., 10.	4.	

<b>Learning Objective(s)</b>	The student will: <ol style="list-style-type: none"> <li>1. Identify hardware, software, and advanced network systems components.</li> <li>2. Demonstrate hardware, software, and advanced network systems preventive maintenance.</li> <li>3. Diagnose problems with hardware, software, and advanced network systems.</li> </ol>
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<b>21<sup>st</sup> Century Competencies</b>	<input checked="" type="checkbox"/> Critical Thinking <input checked="" type="checkbox"/> Communication <input checked="" type="checkbox"/> Collaboration <input checked="" type="checkbox"/> Creativity		Source: Partnership for 21st Century Skills ( <a href="http://www.p21.org/">www.p21.org/</a> )
<b>Essential Question(s)</b>	How does preventive maintenance impact productivity? How do you troubleshoot hardware? How do you troubleshoot software? How do you troubleshoot advanced network systems?		

Content Knowledge	Suggested Instructional Activities	Suggested Materials, Equipment, and Technology Resources
I. Computer set-up	<p>Students will observe teacher demonstration of a computer system set-up.</p> <p>Students will watch the video <i>What's Inside My Computer</i> at <a href="http://computer.howstuffworks.com/inside-computer.htm">http://computer.howstuffworks.com/inside-computer.htm</a>.</p>	<p>Computer and Components Internet Video: <a href="#">What's Inside My Computer</a></p>
II. Hardware <ul style="list-style-type: none"> <li>A. Central Processing Unit (CPU)</li> <li>B. Peripheral Devices</li> <li>C. Input/Output Devices</li> <li>D. Other</li> </ul>	<p>Students will complete the computer hardware crossword puzzle at <a href="http://www.catawba.k12.nc.us/pages/sites/edwebsites/computerskills/onlineactivities.htm">http://www.catawba.k12.nc.us/pages/sites/edwebsites/computerskills/onlineactivities.htm</a>.</p> <p>Students will read informative and helpful articles to learn quick tips for troubleshooting computer problems using the <a href="#">Computer Tips</a> website.</p> <p>Teacher will role play as a customer with a malfunctioning computer. Students will work in groups to troubleshoot computer issues utilizing information from <i>Computer Troubleshooting for Teachers and Students</i> at <a href="http://webpage.pace.edu/ms16182p/troubleshooting/home.html">http://webpage.pace.edu/ms16182p/troubleshooting/home.html</a>. Each group will prepare a statement of diagnosis and recommend solution(s) utilizing word processing software.</p>	<p>Computer Internet Malfunctioning Computers Word Processing Software Printer <a href="#">Crossword Puzzle on Computer Hardware</a> <a href="#">Informative Texts on Computer Tips</a> <a href="#">Computer Troubleshooting for Teachers and Students</a></p>
III. Software <ul style="list-style-type: none"> <li>A. Operating Systems</li> <li>B. Applications</li> </ul>	<p>Students will utilize software Help feature to troubleshoot and resolve hypothetical issues provided by the teacher. Students will utilize technology to produce a clear and coherent report summarizing the process used to resolve the issues. Examples of hypothetical issues: <b>Operating Systems</b> – browser freezes, memory low, content will not display, update needed, browser will not start, etc.; <b>Applications</b> – changing line spacing, creating tables, mail merge, saving file type, changing design and/or layout, creating distribution lists, adding a contact, folder cleanup, adding animation, viewing slides, inserting graphics/images, etc.</p>	<p>Software Computer Printer Hypothetical Issues</p>
IV. Advanced Network Systems	<p>Students develop an understanding of advanced network systems after viewing the video <i>Networking</i> at <a href="http://teachertube.com/viewVideo.php?video_id=79156&amp;title=Networking&amp;vkey=&amp;album_id=">http://teachertube.com/viewVideo.php?video_id=79156&amp;title=Networking&amp;vkey=&amp;album_id=</a>. Students will diagnose hypothetical network connectivity problems</p>	<p>Computer Internet Video: <a href="#">Networking Hypothetical Network Connectivity Problems</a></p>

	utilizing <i>Computer Troubleshooting for Teachers and Students Networking Section</i> at <a href="http://webpage.pace.edu/ms16182p/troubleshooting/network.html">http://webpage.pace.edu/ms16182p/troubleshooting/network.html</a> .	
<b>Assessment of Learning</b>	<b>Formative Assessments (AQTS 2.8)</b> <ul style="list-style-type: none"> <li>• <a href="#">Hardware Quiz -- Part A</a></li> <li>• <a href="#">Hardware Quiz -- Part B</a></li> <li>• <a href="#">Hardware Vocabulary Crossword</a></li> <li>• Class Participation</li> </ul>	<b>Summative Assessments (AQTS 2.9)</b> <ul style="list-style-type: none"> <li>• Troubleshooting pamphlet</li> </ul>
<b>Sample Career Options</b>	Computer Support Specialist, Customer Service Representative, Help Desk Representative, Network Technician, Information Technology Support, Information Center Specialist, User Support Analyst	
<b>Online Experience</b>	Does this lesson address the required online experience? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, please indicate length of time in minutes. <a href="#">Click here to enter text.</a>	
<b>Unit/Course CTSO Activity</b> <i>(if applicable)</i>	Competitive Event (if applicable). Members assist with computer troubleshooting and repairs as a school and/or community service project.	
<b>Culminating Product</b>	Students will prepare a troubleshooting pamphlet for one of the following: hardware, software, or advanced network systems.	
<b>Course/Program Credential(s):</b> <input type="checkbox"/> Credential <input type="checkbox"/> Certificate <input type="checkbox"/> Other:		