Multi-State Advanced Manufacturing Consortium

US DOL SPONSORED TAACCCT GRANT: TC23767

PRIMARY DEVELOPER: Reggie Fluker – Henry Ford College

RELEASE DATE 12/21/2015

VERSION v 001

PAGE 1 of 4

Digital Literacy I: Fundamentals

Unit 6 Computer Maintenance and Security

LAB 1 System Maintenance (Instructor)

Explanation

In this lab, students will demonstrate how to properly clean external computer-hardware and peripherals as well as how to maintain the operating system and hard-drive performance. The idea is that students know how to care for the computer, physically and programmatically, to keep it running smoothly.

While students are cleaning the physical hardware, observe closely and intercede as necessary to prevent any action that could damage computer equipment. For example, immediately stop the student if he/she prepares to spray liquid onto the monitor, or wipe off the keyboard with an excessively wet cloth.

Prompts

1. Specifically describe how dirt affects the performance of a mechanical mouse
2. What are the three things you should do after spilling liquid on a keyboard?
    a. Unplug the keyboard
    b. Turn it upside down to drain
    c. Rinse the keyboard with running water
3. Why is it important to not spray liquid on the monitor screen?
    a. Because the liquid can seep inside of the monitor. It's best to moisten a cloth with water or an appropriate cleaning solution then wipe the screen
4. Is it necessary to manually check for Windows updates often?
5. What is the difference between critical and recommended Windows updates?
6. Based on the percentage of fragmentation, does your hard-drive need to be optimized?

Digital Literacy I: Fundamentals
Unit 6 Computer Maintenance and Security
LAB 1 System Maintenance (Instructor)

Assessment Rubric

CRITERIA	FAIL 0	POOR 1	FAIR 2	GOOD 3	Score
Cleaning the Keyboard	Student does not unplug the keyboard and/or attempts to use excessive liquid to clean the keyboard	Student unplugs the keyboard, and wipes of the keys with a cloth moistened in alcohol or water	Student unplugs the keyboard, gently shakes it, and wipes of the keys with a cloth moistened in alcohol or water	Student unplugs the keyboard, gently shakes it, uses a can of compressed air, and wipes of the keys with a cloth moistened in alcohol or water	
Cleaning Mechanical Mouse	Wipes off the top surface of the mouse, but ignores the track ball and wheels	Able to check specifications for RAM and CPU, not HDD	Able to check specifications for HDD but not RAM an CPU	Able to check specifications for CPU, RAM, and HDD	
Cleaning Optical Mouse	Wipes off the top surface of the mouse, but ignores the bottom surface and light emitter	Wipes off the top and bottom surfaces of the mouse with a *dry* cloth	Wipes off the top and bottom surfaces of the mouse with a cloth moistened in *water*	Wipes off both surfaces of the mouse with a cloth moistened in *rubbing alcohol*	
Cleaning the Monitor	Does not turn off the computer, disconnect or unplug the monitor.	Unplugs and disconnects the monitor, but attempts to spray liquid on the screen	Unplugs and disconnects the monitor and attempts to wipe the screen with glass cleaner	Unplugs and disconnects the monitor and wipes the screen using a clean cloth moistened in water	
Cleaning the Computer Case	Does not shut down and unplug the computer or disconnect	Unplugs and disconnects the computer; wipes the case with a	Unplugs and disconnects the computer; wipes the case with a	Unplugs and disconnects the computer; wipes the case with an	

Multi-State Advanced Manufacturing Consortium	RELEASE DATE	12/21/2015
US DOL SPONSORED TAACCCT GRANT: TC23767	VERSION	v 001
	PAGE	3 of 4

PRIMARY DEVELOPER: Reggie Fluker – Henry Ford College

Digital Literacy I: Fundamentals

Unit 6 Computer Maintenance and Security

LAB 1 System Maintenance (Instructor)

CRITERIA	FAIL 0	POOR 1	FAIR 2	GOOD 3	Score
	peripherals, and attempts to use a strong solvent or cleaner	cloth moistened in water	cloth moistened in water, and clears intake slots with compressed air	anti-static cloth, and clears intake slots with compressed air	
Windows Update	Unable or unaware how to open the Settings app	Opens the Settings app but unable to access Windows Update	Checks for updates, but unable to filter-out critical updates only	Access Windows Update, checks for updates, and installs critical updates only	
Maintenance Settings	Unaware that maintenance settings are accessed in the Security and Maintenance window	Knows that maintenance settings are found in Security and Maintenance, but unable to launch it	Open Security and Maintenance window but unable to locate specific settings	Access and reviews all of the system settings using the Security and Maintenance window	
Disk Cleanup	Unable to access or launch the Disk Cleanup utility	Accesses Disk Cleanup but doesn't know how to select the hard drive	Selects the hard-drive in Disk Cleanup and deletes files	Selects the hard-drive in Disk Cleanup and deletes Temporary Internet Files *only*	
Disk Defragment	Unable to access or launch the Disk Optimizer utility	Accesses Disk Optimizer but doesn't know how to select the hard drive	Selects and analyzes the hard-drive in Disk Optimizer, but incorrectly assesses the need to optimize the disk	Selects and analyzes the hard-drive in Disk Optimizer, and correctly assesses the need to optimize the disk	

Multi-State Advanced Manufacturing Consortium

US DOL SPONSORED TAACCCT GRANT: TC23767

PRIMARY DEVELOPER: Reggie Fluker – Henry Ford College

RELEASE DATE	12/21/2015
VERSION	v 001
PAGE	4 of 4

Digital Literacy I: Fundamentals

Unit 6 Computer Maintenance and Security

LAB 1 System Maintenance (Instructor)

SAFETY DISCLAIMER:

M-SAMC educational resources are in no way meant to be a substitute for occupational safety and health standards. No guarantee is made to resource thoroughness, statutory or regulatory compliance, and related media may depict situations that are not in compliance with OSHA and other safety requirements. It is the responsibility of educators/employers and their students/employees, or anybody using our resources, to comply fully with all pertinent OSHA, and any other, rules and regulations in any jurisdiction in which they learn/work. M-SAMC will not be liable for any damages or other claims and demands arising out of the use of these educational resources. By using these resources, the user releases the Multi-State Advanced Manufacturing Consortium and participating educational institutions and their respective Boards, individual trustees, employees, contractors, and sub-contractors from any liability for injuries resulting from the use of the educational resources.

DOL DISCLAIMER:

This product was funded by a grant awarded by the U.S. Department of Labor's Employment and Training Administration. The product was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership.

RELEVANCY REMINDER:

M-SAMC resources reflect a shared understanding of grant partners at the time of development. In keeping with our industry and college partner requirements, our products are continuously improved. Updated versions of our work can be found here: http://www.msamc.org/resources.html.