



Cyber Centurion: Updates and Software lesson plan

TOPIC Updates and Software

OUTCOME Understand what auditing is and how it can improve security and understand the advantages and implementation of policies.

LEARNING OBJECTIVES

1. Understand the fundamental concepts of systems administration and the differences in configuring this in Windows and Ubuntu environments
2. Understand why you should update regularly
3. Understand the risks to having out-of-date software installed
4. Understand the risks of having malicious software installed
5. Understand what a service is
6. Understand why tasks might be automated in an operating system

	Teacher Activity	Pupil Activity
<p>Lead activity 1</p> <p>(5-10 mins)</p> <p>[individual/paired or group]</p>	<p>Why are updates important?</p> <p>Why do you want to keep software up-to-date?</p> <p>What is a malicious piece of software?</p> <p>What types of malicious software exist?</p> <p>What is a service?</p> <p>What are advantages to running programs as services?</p>	<p>Students to discuss... (individual/paired or group)</p> <p>Answer open questions</p> <p>Answer directed questions</p>
<p>Main activity</p> <p>(15-20 Mins)</p> <p>Resources:</p> <ul style="list-style-type: none"> ● Paper & pen ● Presentation ● Model answer 	<p>Put students into small teams.</p> <p>15-20 minutes to discuss and research the software and determine which should remain, and which are out-of-date or malicious, and need removing or updating.</p> <p>5-10 minutes to explain and justify their choices</p> <p>Reveal model answer on slide.</p>	<p>Students discuss the software which currently exists on the computer.</p> <p>Students research the different pieces of software currently on the computer.</p> <p>Students decide which software should be removed and why.</p> <p>Students note which software should be updated.</p>
<p>Extension activity 1</p>	<p>Students should do this work</p>	<p>Students should look at the different</p>

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<p>(5-10 Mins)</p>	<p>individually.</p> <p>Students should be shown the list of categories of different types of common malicious software.</p>	<p>categories of software on the slide and research at least one program for each category.</p>
<p>Extension activity 2 (5 mins)</p>	<p>Show the list of mock scheduled tasks to the students.</p> <p>5 minutes for the students to suggest one of the tasks as being potentially malicious.</p> <p>If students are unsure of what a task does, or the location of a file, perhaps give them a hint as to the function of a program or location.</p> <p>Reveal the answer slide and explain why the indicated task is probably malicious.</p>	<p>Students to discuss what the tasks do, using a combination of existing knowledge and online research.</p> <p>Students must collectively agree that one of the tasks is malicious.</p>

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