## **Lesson Title: What is Malware?**

Created by: Jackie Allen, Rowan-Cabarrus Community College

<b>Major Sections</b>	Content
Lesson Overview	Overall Purpose:  The class can be divided into 6 groups of 3-4 students. Each group will pick one of the types of malware (key terms below), and write up a description of the type of malware chosen and any information on how to prevent getting the malware and present to the class. Office 2021 content is covered in the class, the students will use PowerPoint for their presentation. The students will create a type of game for review. The game can be in digital format or something the group manually creates.
	Estimated Timeframe:  Students will have about 1 hour of class time so the group can delegate what each person will be responsible for.  Students must submit a layout of the job duties and describe what type of review game they will create (for instructor approval).  Students should exchange texts or email information so they can follow up with each other.  Students should spend 1 to 1-1/2 hours to complete their portion of the presentation for review.  Two to 2-1/2 hours total for presentation preparation.
	Day of the presentation –7-10 minutes for presentation, 10 minutes to fill out the survey.  Courses for Implementation:
	CIS110 ENG111 COM110 COM120
	Format: Seated
	Key Terms: Virus, Trojan Horse, Worm, Ransomware and Phishing.
	Standards/Skills Addressed:  Academic The students will be currently taking CIS110 and since PowerPoint is later in the class. English and Communications class should be taken during this time (if not before CIS110). This will give the students who are currently taking the above courses -a few months in those courses -so they will have most of the semester under their belt. This should allow them plenty of time to apply their knowledge of the 3 classes and apply everything on the presentation day.

Major Sections	Content
	Technical - : Students should use Office for the presentation and it will be recorded using Teams.
	21st Century/Employability  Technology terminology and communication skills. In the presentation they will explain the terms and this will show they know how to communicate to explain how to see if you have a malware and what to do if you find that you have a type on your system.
	Learner Outcomes/Student Learning Objectives:  • Discuss computer safety and health risks  • Use protective measures to safeguard computers and data
	ADA
	1. If the student's record any part of the presentation, they will need to ensure the Closed Captioning is included or they need to create a Word document that will have the transcript of the information spoken.
	2. YouTube videos will need to be confirmed they have the CC available for students to click to activate while watching.
	3. For the actual presentation, the student will likely already have someone who can sign, and we will meet up with the interpreter to ensure any special signing for the terminology.
	4. Blind students: Translations oftware https://braillo.com/duxbury-braille-translation-software/ that can be used to convert text into braille. This way anything printed could be converted. This is a link for free conversion software from Perkins school for the blind. https://www.perkins.org/resource/brailleblaster-free-braille-transcription-software/
	https://www.ada.gov/topics/intro-to-ada/ Website to review general ADA requirements.
Equipment/Materials	List of Materials/Equipment/Texts: Students can refer to their textbook and Internet. Instructor should have discussed how students can validate/trust websites in an earlier chapter using the CARS (Credibility, Accuracy, Reasonableness and Support) method. Instructor can help with supplies if needed.
	Student reference for CARS: <a href="https://sites.google.com/site/evaluateinformationsources/carschecklist">https://sites.google.com/site/evaluateinformationsources/carschecklist</a>
	Link for general games students can also use for their review game.
	https://ahaslides.com/blog/online-classroom-games-for-all-ages/

<b>Major Sections</b>	Content
Discussion	Industry/Real-world Scenario: Since COVID, several educational institutions have been hit with a type of Ransomware. The students will create a presentation to advise employees/students of items they need to be aware of in case they receive an odd email or download or if they notice a thumbdrive in their laptop or docking station. As a school, we will now be implementing Two factor authentication among other safety measures. This is to make employees and students aware of malware and how each of us need to what to do if you receive an email or something suspicious is occurring.
Instructional Strategies	Proposed Teaching Strategies:
	Bloom's:
	Create – Students will create a presentation by gathering the information they can research and what they have previously learned.  Evaluate – Working in teams they will be able to review each person's section of the presentation and bring up questions to ensure the information is adequate for the presentation.
	<b>Analyze</b> – Students will draw the connections as they present the information to show why it is important for everyone to be aware of the risks involved with Malware.
	<b>Apply</b> – They will demonstrate their knowledge when the students ask questions whether it is to clarify a statement or better understand why the risks can be destructive.
	<b>Understand</b> – I think this is close to Apply, in when the students explain the topics or their reasoning for the importance of being aware of Malware. This will show that they have identified the crucial topics.
	<b>Remember</b> - This will come in the form of the review that the students will choose. Hopefully this will be a good reminder of the previous module as well as to emphasize the importance of Malware and allow the students to review the topics with the game that will be chosen.
	REACT:
	R -We discussed these terms in Module 1 and we are now in Module 3 (PPT). They will be revisiting the chapter where we discussed why the terminology is so important. Now they will learn how to apply it and present the information to a group a
	people.
	E – They will take the knowledge that they learned so they can now teach others.
	A – The malware material was discussed earlier in Module 1. This will give them the background of the malware types and why they need to create this presentation to make everyone aware of the dangers.
	c – They will be working in groups to decide what information should be presented and how they will present it. They can use
	video's and either use audio to work their way through it or record a certain part to play during the presentation.  T – This will occur on the day of presentations. This will show how they have gathered the information and in explaining it to the groups will show us if they understand the content.
Activities/Lesson	Activity Preparation:
Procedure	Instructor
	1. Write up the list of items that need to be included in the presentation.

## **Major Sections Content** 2. Place the class into teams of 3-4 students 3. Check in a few times to see how everyone is doing. 4. Pick about 3-4 students for reviewing the presentations. These students will not have to be a part of the group presentation. They will have to research how to evaluate a presentation and how to act. I will have two students that would create a presentation to discuss with the class on the expectation of how to behave during a presentation. I have some links below the group can refer. Learner 1. First step once they get into the group is to decide what program they will use, and which team member will complete which step(s). 2. One student will be the contact point for me. I will receive the information on the team members, their part of the presentation and which one is the contact point for me. I am estimating at least 2 team members to gather the information, 1 to be responsible for the review game and 1 to receive the information and create the PPT. **Activity Steps/Lesson Procedure:** 1. They will have 1 hour of class time to brainstorm on what and/or how to present the information to the class. 2. Each student should expect to spend 1-1/2 hours to research their part of the presentation and have it typed for the team member that is compiling everything into the PowerPoint. 3. If the contact point needs me to make copies or have something ready that they need for the presentation. I have to receive notice within 24 hours of the presentation. 4. Each group will have 20 minutes to quickly meet and make sure everything has been submitted into Blackboard and roughly review any last-minute questions. This way when the presentations begin no one is having to scramble to upload any of the work. **Expected Results/Learner Products:** (Observations, data collection, calculations, products, wrap-up/conclusions, etc.) 1. Students will be allowed to ask questions during the presentation. I will have picked 3-4 students who will also evaluate each team's presentation. 2. To gain social skills – The presentation group will have reviewed how to behave during presentations and what wrap up behavior the "audience" will do. For example, clapping hands at the end or be as quiet as you can so everyone can hear around you. **Extension Options:** 1. Have a company IT person or the campus IT security employee oversee the presentation and give an evaluation in regard to the group's topic and communication skills.

<b>Major Sections</b>	Content
Faculty Decaymen	
Faculty Resources	Background Material:
	Behavior during presentation – This will open as a PDF.
	https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwig0frO5KT-
	AhXrQTABHWIyATkQFnoECAoQAw&url=https%3A%2F%2Fasf.net%2Fwp-content%2Fuploads%2F2020%2F05%2Fhow-to-be-a-great-audience-member.pdf&usg=AOvVaw1eb_Y4yRwPIxBNwV0gVfH5
	dudichee member parkasse novvawies 144100 in
	Six tips to being a good audience member. <a href="https://ntelt.cikd.ca/six-habits-of-a-good-audience-member/">https://ntelt.cikd.ca/six-habits-of-a-good-audience-member/</a>
	Being a good audience member <a href="https://www.youtube.com/watch?v=6THPTzLj81k">https://www.youtube.com/watch?v=6THPTzLj81k</a>
	Handouts and Supplemental Materials:
	The review game examples will be discussed for those who are not well acquainted with technology be creating a BINGO or crossword
	puzzle. Those students who are well- known with technology could be creating a Jeopardy game or Kahoot or another digital review game listed in link above.
	In CIS110 we will cover PowerPoint and how to incorporate audio. If a student is uneasy with presenting in front of the class, they can record their part of the presentation and insert it in the PowerPoint or the group can find a YouTube video to include.
	Answer Keys:
	These will be coming from the students. The jeopardy game will be available online for the students to play at any time. If the review game is a handout like the cross-word puzzle or the bingo game I will have made copies of the solution file and will post. Kahoot or any type of digital game the students will have access to the game at least through the end of the module.
	Suggested Website Links:
	A website that has about 15 different types of digital review games the students could choose is listed in the Equipment/Materials section above.
Assessment	How will students demonstrate what they have learned?
	The videos will be recorded and sent back to each team, and I would like for them to evaluate themselves.
	Learner Products/Assessment Tools or Processes:
	Create the following assessment tools, as appropriate:
	Performance task checklists – here is a screen shot to show what the students see (the first screen shot) and how I can gauge what to cover in class. You can copy and paste into a word processing software.

## **Major Sections Content** Training Individual Performance Thursday, April 13, 2023 06:56 PM 2/9/2023 Student: Due Date: CIS-110-02H-2023SP Module 1 Unit 5 Training Assignment: Section: CIS-110-02H-2023SP Percent Complete: Scheduling Instructor: Curlee, Anne Total Time Spent (hh:mm:ss): 00:27:59 Subject Activity Task (ID) Compare native apps and web Compare native apps and web apps. (10581) 2/7/2023 1:22:00 PM Computer Concepts N/A N/A Computer Concepts Identify smartphones Identify smartphones (10767) 2/7/2023 1:24:00 PM 00:01:50 Computer Concepts Access online education. Access online education, (10549) 2/7/2023 1:26:00 PM 00:00:35 N/A N/A N/A Computer Concepts Access online entertainment and Access online entertainment and media. (10550) N/A N/A 2/7/2023 1:30:00 PM Computer Concepts Access online news and Access online news and information. (10551) 00:00:16 Computer Concepts Access videos on the web. Access videos on the web. (10552 2/7/2023 1:31:00 PM 00:00:10 Computer Concepts Access web apps. Access web apps. (10577) 2/7/2023 1:34:00 PM 00:02:11 Use app stores. (10590) 2/7/2023 1:35:00 PM Computer Concepts Use app stores. 2/7/2023 1:37:00 PM Computer Concepts Describe types of apps. Describe types of apps. (10645) 00:00:17 Computer Concepts Attend video conferences. Attend video conferences. (10692) N/A N/A N/A 2/7/2023 1:41:00 PM 00:02:59 Computer Concepts Play sounds and music Play sounds and music. (10697) 2/7/2023 1:43:00 PM 00:00:19 00:01:34 Play video. Play video. (10730) N/A 2/7/2023 1:45:00 PM Computer Concepts Computer Concepts Identify common features of apps. Identify common features of apps. (10647) 2/7/2023 1:46:00 PM 00:00:17 2/7/2023 1:48:00 PM 00:00:36 Computer Concepts Update apps. (10650) Computer Concepts Identify trends in app development Identify trends in app development (10776) 2/7/2023 1:50:00 PM 00:00:27 Computer Concepts Summarize current trends in app Summarize current trends in app development. (10811) N/A N/A N/A 2/7/2023 1:56:00 PM 00:01:54 2/7/2023 1:58:00 PM Analyze spreadsheet data Analyze spreadsheet data (10779) 2/7/2023 2:02:00 PM 00:02:39 This screen shot is what the students see, and it tells them which task they missed and if the student has questions, I can review this to know where the issue could be. Observations -- In the classroom they begin working on the textbook project and since I am located in the front it is easy to see their faces to know it they seem to be struggling with any part. I do walk around the room – I have found that some students do not have issues letting me know by raising their hand. Others are very intimidated and when I walk around, they tend to open up and get my attention. Discussion participation – Each student will be required to ask one of the groups at least 1 question. Quizzes, tests – Here is what the frequency results are from a test. I can see the average score, how many received full credit and how many on each task did not. These are the tasks to make sure I review in class. The students that miss if they are not sure what they did I can go to their individual grade, and it will show me a video of what they did so I can see what they did wrong and explain to the student to ensure they know how to do this for the Module test.

