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COMPUTER SYSTEMS SERVICING GRADE 11

Module 7
“Setting-up

Wireless Network”

Computer Systems Servicing NCII – Grade 11
Quarter 4 – Module 7: Setting-Up Wireless Network
First Edition, 2020

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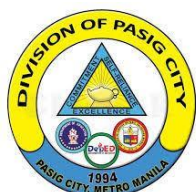
COMPUTER SYSTEMS SERVICING NCII

11

Quarter 4

Self-Learning Module 7

Setting-up Wireless Network



Introductory Message

For the facilitator:

Welcome to the **Computer Systems Servicing G11** module on 3Rs Environmental Policies. This module was collaboratively designed, developed and reviewed by educators from Schools Division Office of Pasig City headed by its Officer-In-Charge Schools Division Superintendent, Ma. Evalou Concepcion A. Agustin in partnership with the Local Government of Pasig through its mayor, Honorable Vico Sotto.

The writers utilized the standards set by the K to 12 Curriculum using the Most Essential Learning Competencies (MELC) while overcoming their personal, social, and economic constraints in schooling.

This learning material hopes to engage the learners into guided and independent learning activities at their own pace and time. Further, this also aims to help learners acquire the needed 21st century skills especially the 5 Cs namely: Communication, Collaboration, Creativity, Critical Thinking and Character while taking into consideration their needs and circumstances.

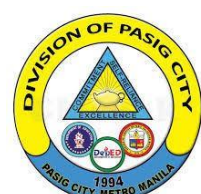
In addition to the material in the main text, you will also see this box in the body of the module:



Notes to the Teacher

This contains helpful tips or strategies that will help you in guiding the learners.

As a facilitator you are expected to orient the learners on how to use this module. You also need to keep track of the learners' progress while allowing them to manage their own learning. Moreover, you are expected to encourage and assist the learners as they do the tasks included in the module.



For the learner:

Welcome to Computer Systems Servicing NCII. The hand is one of the most symbolized part of the human body. It is often used to depict skill, action and purpose. Through our hands we may learn, create and accomplish. Hence, the hand in this learning resource signifies that you as a learner is capable and empowered to successfully achieve the relevant competencies and skills at your own pace and time. Your academic success lies in your own hands!

This module was designed to provide you with fun and meaningful opportunities for guided and independent learning at your own pace and time. You will be enabled to process the contents of the learning material while being an active learner.

This module has the following parts and corresponding icons:



Expectation - These are what you will be able to know after completing the lessons in the module



Pre-test - This will measure your prior knowledge and the concepts to be mastered throughout the lesson.



Recap - This section will measure what learnings and skills that you understand from the previous lesson.



Lesson- This section will discuss the topic for this module.



Activities - This is a set of activities you will perform.



Wrap Up- This section summarizes the concepts and applications of the lessons.



Valuing-this part will check the integration of values in the learning competency.



Post-test - This will measure how much you have learned from the entire module. Ito po ang parts ng module



EXPECTATIONS

After completing this lesson, you should be able to:

1. understand the requirements in establishing a wireless network;
2. identify the network devices needed to establish a wireless network;
3. appreciate the importance of establishing a wireless network.

PRETEST

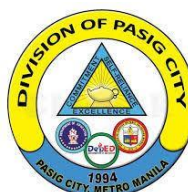
Directions: Read the following statement carefully. Write **T** if the statement is CORRECT and **F** if the statement is WRONG. Write your answer on the space provided.

- _____ 1. It is important to unplug/power off your modem and detach the cable from your internet service provider before connecting it to the router.
- _____ 2. An internet browser can be used to configure the router.
- _____ 3 It is important to add/set up security for out wireless network.
- _____ 4. A wireless network allows you to connect from devices across the area using cables.
- _____ 5. Routers can be placed close to windows, walls, or the microwave.

LESSON

Setting up a Wireless Network

A wireless network allows you to connect from devices across the area without using cables. This module will teach you the basics of setting up a wireless network.



Before you can set up your wireless network, here's what you'll need:

1. **Internet Service Provider.** A company that provides services for internet connection. Digital Subscriber Line (DSL) and cable are two of the most common broadband connections. You can get a broadband connection by contacting an Internet service provider (ISP). Typically, ISPs that provide DSL are telephone companies and ISPs that provide cable are cable TV companies. ISPs frequently offer broadband modems. Some ISPs also offer combination modem/wireless routers. You can also find these at computer or electronics stores, and online.
2. **Wireless router.** A router sends info between your network and the Internet. With a wireless router, you can connect PCs to your network using radio signals instead of wires. There are several different kinds of wireless network technologies, which include 802.11a, 802.11b, 802.11g, 802.11n, and 802.11ac.
3. **Wireless network adapter.** A wireless network adapter is a device that connects your PC to a wireless network. To connect your portable or desktop PC to your wireless network, the PC must have a wireless network adapter. Most laptops and tablets—and some desktop PCs—come with a wireless network adapter already installed.

Steps in setting-up wireless network:

1. **Find the best location for the wireless router.** The optimal placement is in a central location, free from obstructions that could cause wireless interference.
Remember: Don't place the router close to windows, walls, or the microwave.
2. **Turn off the modem.** Unplug your modem and detach the cable from your internet service provider.



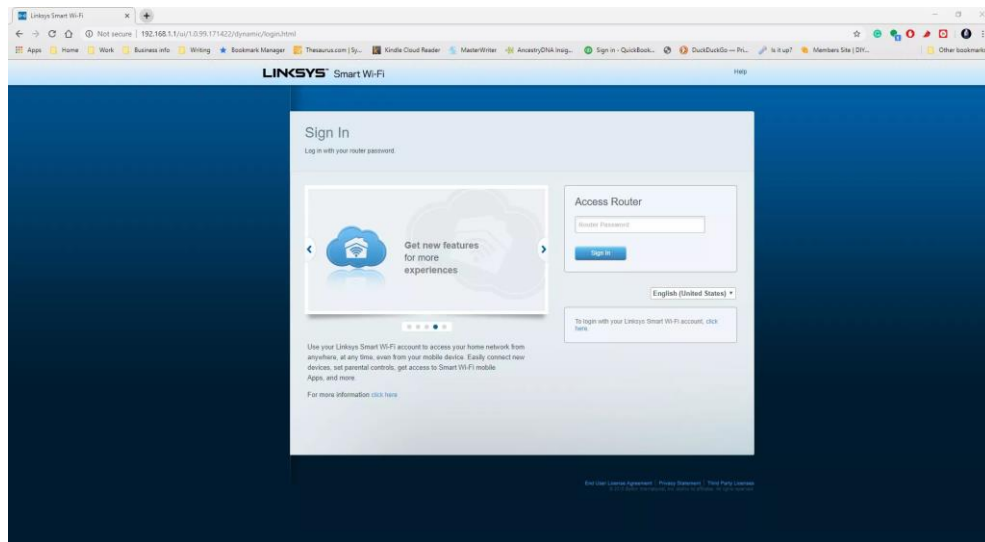
3. **Connect the router to the modem.** Plug an Ethernet cable (typically provided with the router) into the router WAN port. Then, connect the other end of the Ethernet cable to the modem.



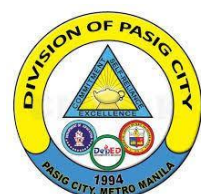
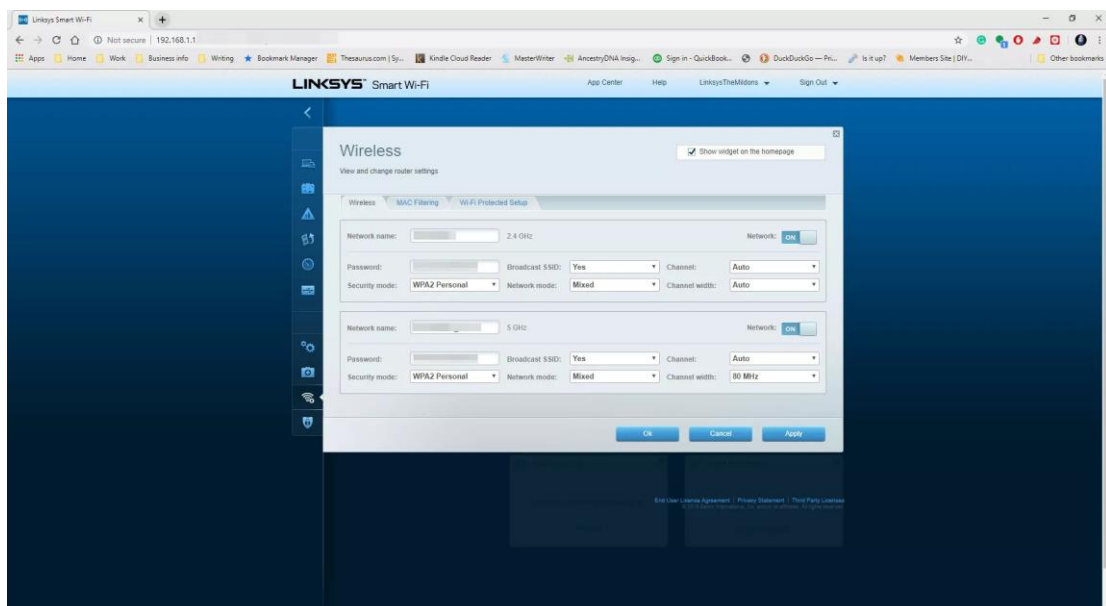
4. **Connect a laptop or computer to the router.** Plug one end of another Ethernet cable into the router LAN port (any port will work) and the other end of the Ethernet cable into the Ethernet port of a laptop. This wiring is temporary; you will remove the cable after setting up the network.



5. **Power up the modem, router, and computer.** It's best if you turn on these devices in the proper order. Turn on the modem first. When the modem lights are all on, turn on the router. When the router is on, turn on the computer.
6. **Configure the router.** Open a browser and enter the IP address of the router administration page. This information is in the router documentation (it's usually something like 192.168.1.1). The login information is also in the manual.



7. **Change the default administrator password (and username) for the router.** This setting is usually on the router administration page in a tab or section called Administration. Use a strong password that you won't forget.
8. **Add WPA2 security.** This step is essential. Find this setting in the wireless security section of the router administration page. Select which type of encryption to use and enter a passphrase of at least eight characters. The more characters and the more complex the password, the better.



Remember: WPA2 is significantly more secure than WEP. Use WPA or mixed mode WPA/WPA2 with older wireless adapters. WPA3 is another option for more recent hardware, but its compatibility is limited.

9. **Change the wireless network name (SSID).** To make it easy for you to identify your network, choose a descriptive name for your SSID (Service Set Identifier) in the router administration page's wireless network information section.
10. **Optional: change the wireless channel.** If you're in an area with other wireless networks, minimize interference by changing the router's wireless channel to one that other networks aren't using.

Use a Wi-Fi analyzer app on your smartphone to find an uncrowded channel or use trial and error (try channels 1, 6, or 11, since these channels don't overlap).

11. **Set up the wireless adapter on the computer.** After saving the router's configuration settings, unplug the cable that connects the computer to the router. Then, plug a USB or PC card wireless adapter into the laptop if it doesn't have a wireless adapter installed or built-in. Your computer may automatically install the drivers, or you may have to use the setup CD that came with the adapter.
12. **Connect to the wireless network.** On your computer and other wireless-enabled devices, find the new network you set up and connect to the network.





ACTIVITIES

Activity # 1: LET'S DRAW

Directions: Create your own illustration of a wireless network using the mentioned requirements/devices and through following the procedures on how to set up a wireless network.



WRAP-UP

DIRECTION: Complete the following sentences base on what you've learn.

1. Wireless network is a type of network that _____

_____.
2. The following are the procedures on how to set up a wireless network

_____.





DIRECTION: Read the following questions carefully. State your answer in two to three sentences each number on the space provided.

1. What do you think are the importance of understanding the procedures in setting up a wireless network?

2. What are the advantages of establishing wireless network over wired network?



POST TEST

Directions: Read the following statement carefully. Write **T** if the statement is CORRECT and **F** if the statement is WRONG. Write your answer on the space provided.

- _____ 1. A wireless network allows you to connect from devices across the area using cables.
- _____ 2. Routers can be placed close to windows, walls, or the microwave.
- _____ 3. It is important to unplug/power off your modem and detach the cable from your internet service provider before connecting it to the router.
- _____ 4. An internet browser can be used to configure the router.
- _____ 5. It is important to add/set up security for out wireless network.





KEY TO CORRECTION

Posttest	Pretest
1. F	1. T
2. F	2. T
3. T	3. T
4. T	4. F
5. T	5. F

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