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COMPUTER SYSTEMS SERVICING



Computer Systems Servicing
Quarter 3 – Module 5: Network materials, tools and testing devices

First Edition, 2020

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COMPUTER SYSTEMS SERVICING

11

Quarter 3

Self-Learning Module 5

Network Materials, Tools and Testing Devices



Introductory Message

For the Facilitator:

Welcome to the **Computer Systems Servicing** Self-Learning Module on **Network materials, tools and testing devices!**

This Self-Learning Module was collaboratively designed, developed and reviewed by educators from the Schools Division Office of Pasig City headed by its Officer-in-Charge Schools Division Superintendent, Ma. Evalou Concepcion A. Agustin, in partnership with the City Government of Pasig through its mayor, Honorable Victor Ma. Regis N. Sotto. The writers utilized the standards set by the K to 12 Curriculum using the Most Essential Learning Competencies (MELC) in developing this instructional resource.

This learning material hopes to engage the learners in 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.

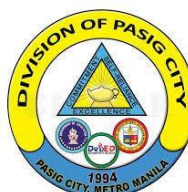
In addition to the material in the main text, you will also see this box in the body of the module:



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 the **Computer Systems Servicing** Self-Learning Module on **Network materials, tools and testing devices!**

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:



Expectations - This points to the set of knowledge and skills that you will learn after completing the module.



Pre-test - This measures your prior knowledge about the lesson at hand.



Recap - This part of the module provides a review of concepts and skills that you already know about a previous lesson.



Lesson - This section discusses the topic in the module.



Activities - This is a set of activities that you need to perform.



Wrap-Up - This section summarizes the concepts and application of the lesson.



Valuing - This part integrates a desirable moral value in the lesson.



Post-test - This measure how much you have learned from the entire module.





EXPECTATIONS

After completing this lesson, you should be able to:

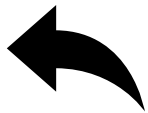
1. recognize the network materials to use.
2. classify the uses network tools and testing device.
3. appreciate the importance of network materials, tools and testing devices.



PRE-TEST

Direction: Read each statement below carefully. Write **T** if the statement is TRUE. Write **F** if the statement is FALSE.

- _____ 1. Modular jack is a unique locking system that prevents accidental unplugging resulting from shock and vibration.
- _____ 2. Crimping tool is a special tool used to cut, hold, and strip network cable.
- _____ 3. RJ23 is a connector attached to the end of a twisted-pair cable.
- _____ 4. Punch down tool is use to connect network wires to a modular jack.
- _____ 5. Twisted-pair are cables that are specifically used in networking.



RECAP

Direction: Identify and choose the answer from the box. Write the answer on the blank space.

Router	Modular box	Modem	Switch	WAP	Patch panel
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- _____ 1. This device that allows other Wi-Fi devices to connect a wired network.
- _____ 2. A device that filters and forwards packets between LAN segments.
- _____ 3. This device that converts data into a format suitable for a transmission medium.



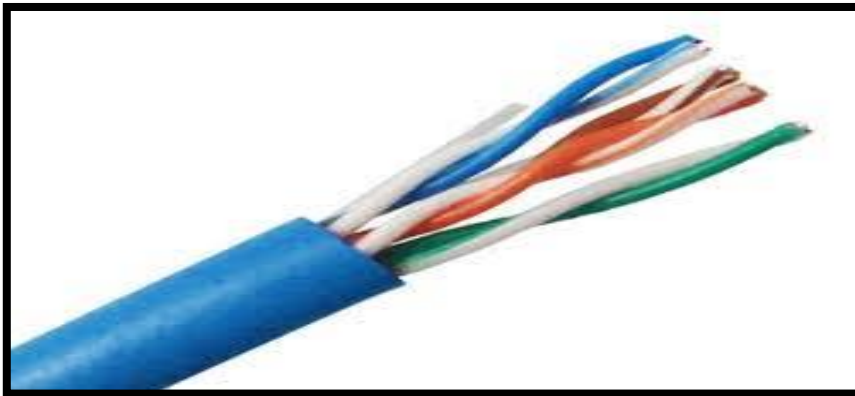
- _____ 4. A bundle multiple network ports together to connect incoming and outgoing lines.
- _____ 5. Use for telephone systems, data networks and low-speed serial.



LESSON

Network materials

1. **Twisted-pair cable** - are cables that are specifically used in networking.



https://www.e-tesda.gov.ph/pluginfile.php/115715/mod_book/chapter/1851/utpcablexx.jpg

2. **RJ45** - a connector attached to the end of a twisted-pair cable.



<https://www.amazon.in/Belkin-RJ45-Plug-Pack-R6G088-50/dp/B000A6LDOQ>



3. Modular jack - a unique locking system that prevents accidental unplugging resulting from shock and vibration.



<https://shopee.ph/AMP-CAT5E-IO-JACK-Keystone-or-Modular-Jack-i.25342931.307393053>

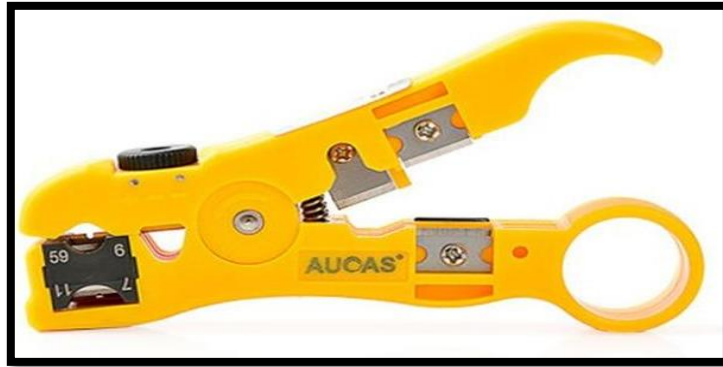
Network tools and Testing device

1. Crimping tool - this is a special tool used to cut, hold, and attach and RJ45 jack to the end of the cable.



<https://www.desertcart.in/products/52136849-tnp-rj-45-crimper-network-cable-crimping>

2. Wire Cutter and Stripper - use to cut and strip for matching different cable sizes.



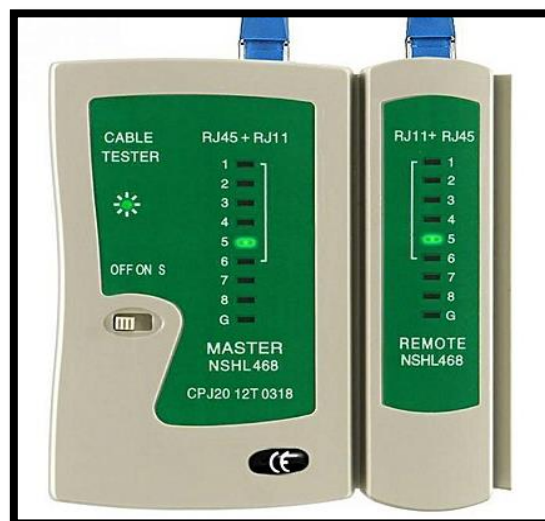
<https://bargainindustries.com/products/32617736114>

3. Punch down tool - use to connect network wires to a patch panel and modular jack.

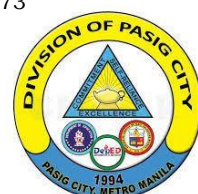


<https://lextec.com/product/110-punch-down-tool>

4. LAN Tester - an electronic device used to verify the connections in a signal cable assembly.



[https://shopee.ph/network-cable-tester\(lan-tester\)-i.158572255.2520389973](https://shopee.ph/network-cable-tester(lan-tester)-i.158572255.2520389973)



[illegible]

1. a unique locking system that prevents accidental unplugging resulting from shock and vibration.
3. use to connect network wires to a patch panel and modular jack.
5. cables that are specifically used in networking.
6. a special tool used to cut, hold, and attach an RJ45 jack to the end of the cable.
7. a connector attached to the end of a twisted-pair cable.





WRAP-UP

The basic network cabling tools are crimping tool, punch down tool and LAN tester. The network materials are twisted pair cable, Rj45 and modular jack. The importance of networking tools is to allow easier troubleshooting, administering and fixing a network by providing effective support through suites of software or functions.

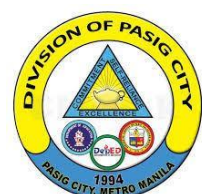


VALUING

Direction: Read and answer the following questions carefully in two to three sentences each number.

1. What are the importance of network materials, tools and testing devices?

2. Cite a situation in which you can apply the knowledge of network materials, tools and testing devices.





POST-TEST

Direction: Read each statement carefully. Write the letter of the correct answer.

- ___ 1. A tool use to connect network wires to a patch panel and modular jack.
- a. Crimping tool
 - b. LAN tester
 - c. Punch down tool
 - d. Wire stripper
- ___ 2. A unique locking system that prevents accidental unplugging resulting from shock and vibration.
- a. Modular jack
 - b. RJ45
 - c. Network cable
 - d. Twisted pair cable
- ___ 3. This electronic device used to verify the connections in a signal cable assembly.
- a. Crimping tool
 - b. LAN tester
 - c. Punch down tool
 - d. Wire stripper
- ___ 4. A connector attached to the end of a twisted-pair cable.
- a. Modular jack
 - b. RJ45
 - c. Network cable
 - d. Twisted pair cable
- ___ 5. This is a special tool used to cut, hold, and attach and RJ45 jack to the end of the cable.
- a. Crimping tool
 - b. LAN tester
 - c. Punch down tool
 - d. Wire stripper





Pre-Test
1. T
2. T
3. F
4. T
5. T

1. WAP
2. Switch
3. Modem
4. Patch panel
5. Modular jack

[illegible]

https://en.wikipedia.org/wiki/Computer_network

