

## Computer Applications II

### LAP 5-Understanding Networks and Computer Security Issues



Name \_\_\_\_\_

Period \_\_\_\_\_

Date Started \_\_\_\_\_

Date Completed \_\_\_\_\_

#### DoDEA Standards

- ♦PT1e Demonstrate a sound understanding of the nature and operation of technology systems, both hardware and software
- ♦PT1h Apply trouble shooting techniques and processes
- ♦PT1k Know the characteristics and uses of operating, environments, and utilities
- ♦PT1l Know the characteristics and uses of communications and networking systems
- ♦PT1p Understand plans and procedures for maintaining the security of information systems
- ♦PT2a Engage in higher order thinking and will apply problem-solving strategies in purposeful ways, both in situations where the problem and desirable solutions are clearly evident and in situations requiring a creative approach to achieve an outcome.
- ♦PT2c Make informed choices among technology systems, resources, and services
- ♦PT4a Access information efficiently and effectively
- ♦PT5d Manage and direct one's own learning.
- ♦PT5j Demonstrate and advocate for legal and ethical behaviors among peers, family, and community regarding the use of technology and information.

#### Objectives

- ♦ Distinguish between a local area network and a wide area network
- ♦ Define an intranet, extranet, and the Internet
- ♦ Differentiate between peer-to-peer and client-server networks
- ♦ Identify the forms of connectivity hardware
- ♦ Differentiate among twisted-pair, coaxial, and fiber-optic cabling methods
- ♦ Identify forms of wireless communication
- ♦ Define T-carrier lines
- ♦ Distinguish among linear bus, star, and ring network topologies
- ♦ Explain the various means of data transmission
- ♦ Identify the types of communication protocols
- ♦ Define a computer virus
- ♦ Describe security measures employed in computer network systems

#### Resource

Title: Computer Technology-Changes, Challenges, and Choices  
 Author(S): C. Norman Hollingsworth and Mary Carole Hollingsworth  
 Chapter 5: Understanding Networks and Computer Security Issues

**Time Frame** 5 hours

#### Introduction

You will understand the definition and features of a network before moving on to the specifics. Connectivity hardware and cabling are important elements of networking. You will know what is required when designing a network and be able to distinguish between the options and when each option is the best choice.

### Assignments

**Where appropriate and possible, written answers must be in complete sentences and keyed.  
Turn in completed activities as directed by instructor.**

\_\_\_\_\_ **Read:** Pages 110-131

\_\_\_\_\_ **Complete:** Multiple Choice questions 1-20 on pages 132-134

\_\_\_\_\_ **Complete:** True False questions 1-20 pages 134-135

\_\_\_\_\_ **Complete:** Technology in Context Questions 1, 2, 3, 4, 5 on pages 135-136

#### Self Assessment - "I/I can . . . "

- \_\_\_\_\_ Distinguish between a local area network and a wide area network
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- \_\_\_\_\_ Identify the forms of connectivity hardware
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**Please ask instructor for additional instructions**