

New Horizons Regional Education Center (C & T)
Pacing Guide

Program: Computer Networking		Teacher	Mr Gregg E. Harris			
1st/2nd/3rd/4th Marking Period Topic/Unit	Virginia State Competency #	Standardized Test Areas for NOCTI/NCCT/Lie./Cert.	Supporting Equipment/Technology			
1st Marking Period						
<p>Implementing Virginia's CTE Course Requirements Demonstrate Virginia's Workplace Readiness Skills Apply Virginia's All Aspects of Industry elements in activities Identify Internet safety issues, procedures, compliances</p> <p>Participating in the Student Organization Identify the purposes and goals of the student organization. Explain the benefits & responsibilities of membership in Student organization as a student and professional adult. Demonstrate leadership skills through student organization activities, meetings, programs and projects</p> <p>Basic LAN/WAN Define the following types of networks: LAN (Local Area Network), MAN (Metropolitan Area Network), and WAN (Wide Area Network). Describe standard topologies, such as bus, star, and ring. Discuss variations of standard topologies, such as extended star, mesh, star bus, and star ring. Describe the role of the NIC (Network Interface Card), including explanation of the MAC (Media Access Control) address and its uses. Describe the purpose of a layered model. Define the major networking protocols (e.g., AppleTalk, IPX/SPX [Internetwork Packet Exchange/Sequenced Packet Exchange], NetBEUI [NetBIOS Extended User Interface]). Explain basic networking concepts and different network structures Compare and contrast peer-to-peer and client/server networks. Describe the primary function of each layer of the OSI model and the way each relates to networking activities.</p> <p>2nd Marking Period Beyond the Basic LAN Discuss various types of network adapters. Describe the functions of networking hardware (e.g., NIC, hub, router, switch, bridge). Describe primary features of each major access method (e.g., contention, demand priority, token passing). Identify the types of physical network media (i.e., coaxial, twisted-pair, fiber-optic) and the uses of each. Explore the concept of broadband and various incarnations, including DSL (Digital Subscriber Line), cable, and high-speed wireless (e.g. satellite, WiFi, WiMax, GSM [Global System for Mobile Communications]). Describe types of modems (e.g., analog, cable, DSL) and standards. Describe devices in a network environment and their place in the OSI model. Describe the network processes that use protocols, and map these to the appropriate OSI (Open Systems Interconnect) levels. Identify components and features of the IEEE (Institute of Electrical and Electronics Engineers) 802 Networking Specifications. Identify essential network operating system components of various server versions. Construct twisted pair cables. Describe the purpose of an Internet Protocol (IP) address and Subnet Mask. Describe the concept of IP addresses and the Domain Name System (DNS). Explain how IP addresses and Subnet Masks are used on the Internet. Describe the types of IP addresses available. Describe the methods of obtaining an IP address. Differentiate between clients and servers and their interaction over the network.</p> <p>3rd Marking Period Computer Repair Identify microtechnology applications. Explain the basic functions of a computer. Locate major operational areas. Connect peripheral equipment. Identify characteristics of various information storage systems. Explain microprocessor structure and architecture. Identify the basic parts of a computer system and the relationships among components. Describe characteristics and functions of CPUs, motherboards, random access memory (RAM), expansion connections, floppy drives, hard drives, and CD-ROM drives. Explain the functions and characteristics of system expansion devices (e.g., graphics cards, sound cards, and modems). Demonstrate the use of connectivity devices and peripheral equipment (e.g., portable storage devices, printers, cable modem, and wireless technologies).</p>	6650.001	NOCTI Test 2414 Computer Networking				
			6650.002			
			6650.003			
			6650.004			
			6650.005			
			6650.006			
			6650.019	Equipment/Supplies	Text Book (Network Fundamentals)	
			6650.023		Test Equipment	
			6650.025	Text Book (Network Fundamentals)		
			6650.026			
			8542.038	Computer Video (Mike Myers)		
			6650.038	" "		
			6670.042	Computer Video (Mike Myers)		
			6670.043	" "		
			6650.035	Computer Video (Mike Myers)		
			6650.027	Equipment/Supplies	Text Book (Network Fundamentals)	
			6650.028		Test Equipment	
			6650.029	Text Book (Network Fundamentals)		
			6650.03	Equipment/Supplies		
			6650.033			
			6650.034	Text Book (Network Fundamentals)		
			6650.036			
			6650.039			
			6650.04	Text Book (Network Fundamentals)		
			6650.041	Equipment/Supplies	Test Equipment	
	8542.03					
	8542.031					
	6670.046	Text Book (Network Fundamentals)				
	8542.032					
	8542.033					
	8542.034	Text Book (Network Fundamentals)				
	8542.036					
	8538.039	Text Book (A+ Guide to Hardware/Software)				
	8538.041	Equipment/Supplies	Provide Equipment			
	8538.042		Text Book (A+ Guide to Hardware/Software)			
	8538.043		Provide Equipment			
	8538.044					
	6670.02	Provide Equipment				
	6670.021	Equipment/Supplies				
	6670.022		Text Book (A+ Guide to Hardware/Software)			
	6670.023					

Describe the basic computer start-up sequence.
Install software programs.
Perform basic software configuration operations.

4th Marking Period

Web Page Designing

Identify Web design principles.
Apply the principles of design in creating advanced Web sites (incorporating features such as Flash, forms, frames, and dropdown menus).
Create advanced Web sites (individually and in teams) using HTML code and/or Web creation software.
Embed scripting routines from a variety of sources into HTML code.
Edit Web sites.
Publish a Web site to a Web server.
Draw and edit objects incorporating features such as fills, borders, and lines.
Enhance a multimedia presentation with features (e.g., color, transitions, backgrounds).
Incorporate digital audio elements, such as music and voice/sound clips.
Use programming language (e.g., HTML, JAVA) or Web page creation software to create Web sites (individually and in teams).
Apply Web page design features (e.g., ruled lines, lists, headings, graphics, backgrounds, frames, tables).
Create hypertext links to other pages or sites.
Enhance a multimedia presentation with features (e.g., color, transitions, backgrounds).
Draw and edit objects incorporating features such as fills, borders, and lines.
Create hypertext links to other pages or sites.

6670.026	
6670.032	Provide Equipment
6670.033	
6631.022	Text Book (Dreamweaver)
6631.024	
6631.025	
6631.027	
6631.031	Text Book (Dreamweaver)
6631.04	
6632.037	
6632.038	
6632.041	Text Book (Dreamweaver)
6632.05	
6632.051	
6632.052	
6630.038	
6630.037	Text Book (Dreamweaver)
6630.052	