

Name: \_\_\_\_\_

## **Unit 2 – Networks and Storage ~ Learning Guide**

INSTRUCTIONS: Complete the following notes and questions as you work through the related lessons. You are required to have this completed BEFORE you write your unit test.

### **Section 2.1 – Computer Networks and File Systems**

#### **Lesson A – Terms for 2.1**

Look for these terms as you work through this section. Some will appear on the unit test.

- file system
- FAT
- NTFS
- HFS+
- data and database
- metadata
- bitmap
- directory file
- NIC
- hub
- switch
- router
- modem
- fibre optic cable
- LAN
- WLAN
- access point
- ethernet
- MAC address
- IP address

## **Lesson B – File Systems**

Why do file systems matter, according to this lesson?

## **Lesson C – Crash Course – File Systems**

What, according to the video, do file systems do?

Why do we need so many different file types? In your response, refer to a few types of files with which you are familiar.

In what way, when we delete a file, is it not really deleted?

What does a directory file do?

## **Lesson D – What is a computer network?**

Explain the difference between the hardware required for wired vs wireless networks.

What are the pros and cons of each type of network?

## **Lesson E – Crash Course – Computer Networks**

After watching this video, explain in your own words why networks were such a profound step in the development of computers. Be sure to refer to the concepts covered in the video.

## **Section 2.2 – Memory and Storage**

### **Lesson A – Terms for 2.2**

Look for these terms as you work through this section. Some will appear on the unit test.

- RAM
- volatile storage
- non-volatile storage
- SSD
- hard drive
- floppy disk
- overwritten
- punch cards
- optical storage

### **Lesson B – Difference between memory and storage**

In a few sentences, explain how memory and storage differ, according to this lesson.

Next, explain how a solid state drive differs from a standard hard drive.

## **Lesson D – Crash Course – Memory and Storage**

Explain in a few sentences how memory and storage have changed from the days of punch cards to today, where a 64 GB thumb drive can be purchased for a few dollars.

## **Section 2.3 The Internet**

### **Lesson A – Terms for 2.3**

Look for these terms as you work through this section. You will need to understand them in context.

- Internet
- World Wide Web
- TCP/IP
- protocols
- 5G networks
- packets
- IP addresses
- ISP
- server
- url
- DNS
- https
- wifi
- UDP
- checksum
- domain

**Lesson B – The Internet**

In your own words, explain the difference between the internet and the world wide web.

**Lesson C – The Internet**

Explain, in your own words, how the internet works according to this lesson.

**Lesson D – The Internet – Crash Course**

Explain as much as possible, how you are able to watch this video on your own device.

Explain how the packets are getting to you through a network.

## Section 2.4 – The World Wide Web

### Lesson A – Terms for 2.4

- hyperlinks
- hypertext
- ASCII text
- markup
- html5
- http protocol
- web browser
- web crawler
- net neutrality
- search engine

### Lesson B – World Wide Web

Why is it so important to the development of the web that standards were put in place early on? Give two or three examples in your response.

**Lesson C – Crash Course – World Wide Web**

Explain why the web needed “web browsers” to access “web pages.”

Explain the role that search engines had to play in the development of the web.