



**TRAIL
LIFE
USA**

Computing

Name _____

Do all of the following requirements (1-4)

- ____1. Explain what the following terms mean or what they tell you about your computer:
 - ____a. Storage: ROM, RAM, flash drive, hard drive
 - ____b. Processor: cores, speed, cache
 - ____c. Units: Gigahertz (GHz), Megahertz (MHz), Terabyte (TB), Gigabyte (GB), Megabyte (MB)
 - ____d. Input/Output: keyboard, mouse, touch pad, liquid crystal display (LCD), touch screen, camera, speakers, headphones, microphones, universal serial bus (USB), Ethernet, Wi-Fi
 - ____e. Peripherals: printer, cloud storage, external hard drives, optical drives, USB thumb drives, scanners

- ____2. Explain your rules and safety guidelines for online computing and social media, and do the following:
 - ____a. Explain the types of malicious software (malware: e.g. virus, Trojan horse, worm, spyware) and how each is transmitted.
 - ____b. Explain how to prevent malware infections and what to do if your computing device has malware infecting it.

- ____3. Demonstrate loading a software application on your computing platform and:
 - ____a. Verify you have the legal right to load and use the software.
 - ____b. Demonstrate the use of the software.
 - ____c. Explain and demonstrate how music you purchase online can be transferred to your computer, mobile device, smart phone or portable media player.
 - ____d. Explain why it would be wrong to install and use an illegal copy of the software, music, or other media.

- _____4. Create a table comparing brands, features, compatibility and prices of a particular type of computing platform or printer such as a desktop, laptop, tablet, mobile device, laser printer, or inkjet printer.
- _____a. Include the following in your comparison table:
- For Computers: processor type and speed, RAM size and speed, hard or flash disk size and read/write speeds, communication methods, included features, software, and price
 - For printers: printer type, print speed, printer price, and cost of supplies.
- _____b. Explain your comparison chart and which computer or printer is the best value (not necessarily the cheapest).

Do three of the following optional requirements (5-16)

- _____5. Help conduct a demonstration of three or more age-appropriate, educational, and enjoyable computer games to younger boys in your Troop.
- _____6. Look at careers in the computer field and what they involve. Interview two people in the computer field to determine what they studied in college, how they prepared for their careers and what advice they might have for you.
- _____7. With others and under the supervision of a qualified adult, take a look inside a desktop computer. Look for the power supply, motherboard, processor and disk drives. Look at the back of the computer to see how the cables are connected and how you might figure out which cables connect where.
- _____8. Create a computer presentation that tells about your experiences in Trail Life USA and any other similar character development programs in which you participated. Include at least three of the following in the document:
- A list of trail badges you have already earned including transfer credit.
 - A table showing the years that you have been involved and the service projects and hours you completed
 - A scanned picture or digital picture of something you did on an outing or campout
 - A list of your favorite activities

- A table showing activities you did and what you learned while doing this activity

- ____9. Read two computer magazines to find out about new products, reviews of existing products and buying information.
- ____10. Demonstrate how to change inkjet or laser toner cartridges in your printer.
- ____11. Make a collection of digital pictures and/or digital video and produce a slide show/movie and show it at a meeting.
- ____12. Explain the importance of backing up your files, and demonstrate your back-up system and procedure.
- ____13. Write a simple software application for your computing platform.
 - ____a. Specify the software with a drawing of the user interface and a set of software requirements (what it will do).
 - ____b. Design the software with a block diagram or other software method with brief descriptions of each block or function.
 - ____c. Code the software with Java, C++ or another appropriate language.
 - ____d. Compile and install the software. Then demonstrate the software.
- ____14. Write a second more complex software application for your computing platform using steps a-d above.
- ____15. Think of an Internet domain name that you might like to register and do the following:
 - ____a. Check to see if it is available.
 - ____b. List the registration costs for one-year and five-year registration
 - ____c. List the cost of a hosting package for your domain name that includes email and webpage hosting.
- ____16. Select one of the following methods and explain how it allows advertisers to track your online browsing activities and identify you personally:
 - ____a. Cookies
 - ____b. Third party cookies
 - ____c. Browser fingerprinting

Trail Badge Mentor Signature

Date

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