

Troop 325 Merit Badge Midway



Computers

Requirements were **REWRITTEN** effective January 1, 2006

Study pamphlet. Do 6, 7 & 10

1. Discuss with your counselor the tips for online safety.
2. Explain how the invention of the computer has affected society, science, and technology. In your explanation, give a short history of the computer.
3. Do the following:
 - A. Explain four different uses of computers.
 - B. Describe three ways you and your family could use a personal computer other than for games and recreation.
4. Explain to your counselor the following:
 - A. The major parts of a computer system
 - B. How the types of files used to store text, sound, pictures, and video are stored in a computer's memory
5. Do the following:
 - A. Explain what a program is and how it is developed.
 - B. Give three examples of programming languages, and describe their uses.
 - C. Name four software packages you or your family could use, and explain how you would use them.
 - D. Discuss ways you can help protect a computer from viruses and how to keep secure information that has been saved on a computer.
 - E. Describe how computers are linked to form the Internet and the World Wide Web.
6. Do **THREE** of the following:
 - A. Use a database manager to create a troop roster that includes the name, rank, patrol, and telephone number of each Scout. Show your counselor that you can sort the register by each of the following categories: rank, patrol, and alphabetically by name.
 - B. Use a spreadsheet program to develop a food budget for a patrol weekend campout.

- C. Use a word processor to write a letter to the parents of your troop's Scouts inviting them to a court of honor. Use the program's mail merge feature to make a personalized copy of the letter for each family.
 - D. Use a computer graphics program to design and draw a campsite plan for your troop, OR design a flyer for an upcoming troop event.
 - E. Using a software package of your choice, develop a short presentation about a topic that has been approved by your counselor. For your presentation create at least 10 slides.
 - F. Using an Internet search engine, find ideas about how to conduct a troop court of honor or campfire program. Print out a copy of the ideas from at least three different Web sites. Share what you found with your counselor, and explain how you used the search engine to find this information.
 - G. Using a digital camera, take a picture of a troop activity. Transfer the picture file to a computer and use photographic software to make it small enough to send easily as an e-mail attachment. Then, using a computer connected to the Internet (with your parent's permission), send an e-mail to someone you know. In your message, include the photograph as an attachment. Verify that the person received your e-mail and was able to view the attachment.
 - H. Describe two computer chip-based devices, and explain how they are "smarter" because of the chip and its program.
7. Do ONE of the following:
- A. Visit a business or an industrial plant that uses computers. Observe what tasks the computers accomplish, and be prepared to discuss what you have learned.
 - B. Using a software package of your choice for computer aided design (CAD), create an engineering-style drawing of a simple object. Include the top, bottom, and at least one side view and the dimensions.
 - C. Use a general purpose programming language to write a simple program application of your choice, subject to approval by your counselor.
 - D. Design a Web page for your troop, patrol, school, or place of worship. You need not post the page to a Web site. However, if you decide to do so, you will first need to get your parent's permission and your counselor's approval, as well as permission from the host site.
8. For each of the following categories, discuss several related terms: input and output devices, storage media, memory, processors and coprocessors, modems or network cards, networks, World Wide Web and Internet, electronic mail, Wi-Fi.
9. Explain the following to your counselor:
- A. Why it is not permissible to accept a free copy of a copyrighted computer game or program from a friend
 - B. The restrictions and limitations of downloading music from the Internet
 - C. Why copyright laws exist
10. Pick two career opportunities in the computer field that interest you. Find out what education, training, and experience those positions require. Report what

you learn to your counselor.

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