



Computers

Merit Badge Workbook

This workbook is not required but is designed to help you with this merit badge. No one can add or subtract from the Boy Scout Requirements #33215. Use page backs & add pages as needed. Please send comments to: craig@craiglincoln.com. Requirements revised: 2006, Workbook updated: January 2006.

Scout's Name: _____ Unit: _____

Counselor's Name: _____ Counselor's Ph #: _____

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.

1 _____

2 _____

3 _____

4 _____

b. Describe three ways you and your family could use a personal computer other than for games and recreation.

1 _____

2 _____

3 _____

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.

Language	Uses
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1 _____

2 _____

3 _____

c. Name four software packages you or your family could use, and explain how you would use them.

Packages	Uses
----------	------

1 _____

2 _____

3 _____

4 _____

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.
