



# Computers

## Merit Badge Workbook

This workbook can help you but you still need to read the merit badge pamphlet (book). No one can add or subtract from the Boy Scout Requirements #33215. Merit Badge Workbooks and much more are below: [Online Resources](#).

Send comments to: [craig@craiglincoln.com](mailto:craig@craiglincoln.com). Requirements revised: 2006, Workbook updated: February 2008.

Scout's Name: \_\_\_\_\_ Unit: \_\_\_\_\_

Counselor's Name: \_\_\_\_\_ Counselor's Ph #: \_\_\_\_\_

1. Discuss with your counselor the tips for online safety. \_\_\_\_\_

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2. Explain how the invention of the computer has affected society, science, and technology. \_\_\_\_\_

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In your explanation, give a short history of the computer. \_\_\_\_\_

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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

Part	Explanation
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

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
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, \_\_\_\_\_

\_\_\_\_\_

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.

Opportunity \_\_\_\_\_

Education, training, and experience \_\_\_\_\_

\_\_\_\_\_

Opportunity \_\_\_\_\_

Education, training, and experience \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Online Resources** (Use any Internet resource with caution and only with your parent's or guardian's permission.)

**Merit Badge Workbooks:** [usscouts.org](http://usscouts.org) -or- [meritbadge.org](http://meritbadge.org)      ► **Merit Badge Books:** [www.scoutstuff.org](http://www.scoutstuff.org)

Boy Scouts of America: <http://www.scouting.org/>      ► [Requirements](#)      ► [Intro to Merit Badges](#)

[ExpertVillage Computer Video Lessons:](#)      📺 [Typing Lessons](#)      📺 [Internet Explorer](#)      📺 [Google](#)

📺 [Create a Budget in an Excel Spreadsheet](#)      📺 [Mail Merge Word and Excel](#)      📺 [Outlook Email](#)

📺 [PowerPoint Presentation Basics](#)      📺 [PowerPoint Presentation](#)      📺 [Powerpoint3](#)

Macworld: <http://www.macworld.com>      PC Magazine: <http://www.pcmag.com>      PC World: <http://www.pcworld.com>

American Society for Engineering Education: <http://www.asee.org>, <http://www.engineeringk12.org>

The Computer History Museum: <http://www.computerhistory.org>      The Computer Society: <http://www.computer.org>

Institute of Electrical and Electronics Engineers: <http://www.ieee.org>

International Intellectual Property Alliance: <http://www.iipa.com>      Recording Industry Assn of Amer.: <http://www.riaa.com>

The Internet Society: <http://www.isoc.org>      World Wide Web Consortium: <http://www.w3c.org>