



# Computers

## Merit Badge Worksheet

2010 Rev. Created  
by Craig Long 2010

Scouts Name \_\_\_\_\_

Date \_\_\_\_\_

Counselor's Name \_\_\_\_\_

Counselor's Phone # \_\_\_\_\_

Complete

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

Complete

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

Give a short history of the computer. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Complete

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. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Complete

4. Explain the following:

a. The major parts of a computer system

Part	Description of operation

b. How are the following files stored ?

Sound	
Video	
Pictures	

c. How are files compressed? \_\_\_\_\_

How does compression change the quality? \_\_\_\_\_

d. Describe two computer chip-based devices \_\_\_\_\_

How are they smarter because of the chip and programming ? \_\_\_\_\_

Complete

5. Do the following:

a. Explain what a program is and how it is developed.

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b. Give three examples of programming languages, and describe their uses.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

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

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. \_\_\_\_\_

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Complete

6. Do THREE of the following:

- a. Use a spreadsheet program to develop a food budget for a patrol weekend campout. Software Used \_\_\_\_\_ Date Completed \_\_\_\_\_
- b. Use a word processor to write a letter to your counselor(me) and email it to clong@troop169.us
- c. Use a computer graphics program to design and draw a campsite plan for your troop, OR design a flyer for an upcoming troop event. Software Used \_\_\_\_\_
- d. Using a computer graphics program, create a flier for an upcoming tropp event, incorporating both text and some type of visual such as a photo or illustration. Viewed on date \_\_\_\_\_
- e. 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. Completed \_\_\_\_\_
- f. 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. Viewed on date \_\_\_\_\_
- 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. Completed \_\_\_\_\_
- h. 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 rank, patrol, and aphlabetically. What software did you use? \_\_\_\_\_

Complete

7. Do ONE of the following:

- a. Using a database manager, create a troop roster that includes the name, the rank, patrol, and telephone number of each scout. Create a form within the database that lets you access each scout individually . What software did you use? \_\_\_\_\_
- 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. What software did you use? \_\_\_\_\_

c. Create a blog and use it as an online journal of your Scouting activities, including group discussions and meetings, campouts, and other events. Your blog should have at least five entries and two photographs or illustrations. You need not post the blog to the Internet, but you will need to share it with your counselor. If you decide to go live with your blog, you must first share it with your parents AND counselor and get their approval. Date blog completed. \_\_\_\_\_ Approval \_\_\_\_\_

d. d. Create a Web page for your troop, patrol, school, or place of worship. Include at least three articles and two photographs or illustrations. Your Web page should have at least one link to a Web site that would be of interest to your audience. You need not post the page to the Internet. However, if you decide to do so, you must first share it with your parents AND counselor and get their approval. url \_\_\_\_\_ approval \_\_\_\_\_

e. 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. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Complete

8. Explain the following to your counselor:

a. Why do copyright laws exist ? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

b. Why it is not permissible to accept a free copy of a copyrighted computer game or program from a friend ? \_\_\_\_\_  
\_\_\_\_\_  
Explain the concepts of freeware and shareware. \_\_\_\_\_  
\_\_\_\_\_

c. The restrictions and limitations of downloading music from the Internet \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Complete

9. Pick three 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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For each of the following categories, explain there function.

Input Device	
Output Device	
Storage Media	
Memory	
Processors	
Coprocessors	
Modem	
Network Cards	
Networks	
World Wide Web	
Internet	
Electronic Mail	
Wi-Fi	