



Computers

Merit Badge Workbook

This workbook can help you but you still need to read the merit badge pamphlet.

The work space provided for each requirement should be used by the Scout to make notes for discussing the item with his counselor, not for providing the full and complete answers. Each Scout must do each requirement.

No one may add or subtract from the official requirements found in **Boy Scout Requirements** (Pub. 33216 – SKU 34765).

The requirements were last issued or revised in 2010 • This workbook was updated in March 2012.

Scout's Name: _____ Unit: _____

Counselor's Name: _____ Counselor's Phone No.: _____

<http://www.USScouts.Org> • <http://www.MeritBadge.Org>

Please submit errors, omissions, comments or suggestions about improving this workbook to: Workbooks@USScouts.org

1. Discuss with your counselor the tips for online safety. _____

2. Give a short history of the computer. _____

Explain how the invention of the computer has affected society, science, and technology. _____

Society: _____

Science: _____

Technology: _____

3. Do the following:

- a. Describe four uses of computers outside the home.

1 _____
2 _____
3 _____
4 _____

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

1 _____
2 _____
3 _____

4. Explain the following to your counselor:

- a. The five major parts of a computer.

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

- b. How text, sound, sound, pictures, and video files are stored in a computer's memory

Text: _____

Sound: _____

Pictures: _____

Video files: _____

- c. How file compression works and how compression affects the quality of the file.

How compression works: _____

How compression affects the quality of the file: _____

- d. Describe two computer chip-based devices, and describe how they are "smarter" because of the chip and its program.

Device 1: _____

Device 2: _____

How are they "smarter"? _____

- 5. Do the following:

- a. Explain what a program or software application is and how it is developed. _____

- b. Name three 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 protect the information stored on a computer.

How to protect from viruses: _____

How to protect the information: _____

e. Describe how computers are linked to generate and access the Internet and the World Wide Web. _____

6. Do THREE of the following:

- a. Using a spreadsheet program, develop a food budget for a patrol weekend campout.
- b. Using a word processor, write a letter to the parents of your troop's Scouts inviting them to a court of honor.
- c. Using a computer graphics program, design and draw a campsite plan for your troop.
- d. Using a computer graphics program, create a flier for an upcoming troop event, incorporating both text and some type of visual such as a photograph or illustration.

- e. Using an Internet search engine (with your parent's permission), 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.
- f. Using a presentation software program of your choice, develop a report about a topic that has been approved by your counselor. For your presentation, create at least 10 slides.
- 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. Using a database manager, 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.

7. Do ONE of the following:

- a. Using a database program of your choice, create a troop roster that includes the name, rank, patrol, and telephone number of each Scout.
- Create a form within the database manager to access each Scout's information individually. Show your counselor how the form works.
- 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. 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.
- 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.
- 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. _____

8. Explain the following to your counselor:

- a. Why copyright laws exist. _____

- b. Why it is not permissible to accept a paid, copyrighted computer game or program from a friend unless the game or program is considered freeware or shareware. _____

Explain the concepts of freeware and shareware. _____

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

9. Find out about three career opportunities in the computer industry. _____

1. _____

2. _____

3. _____

Pick one and find out the education, training, and experience required for this profession. _____

Career: _____

Education: _____

Training: _____

Experience: _____

Discuss this with your counselor, and explain why this profession might interest you. Report what you learn to your counselor. _____

Requirement resources can be found here:
http://www.meritbadge.org/wiki/index.php/Computers#Requirement_resources

Important excerpts from the [‘Guide To Advancement’](#), No. 33088:

Effective January 1, 2012, the ‘Guide to Advancement’ (which replaced the publication ‘Advancement Committee Policies and Procedures’) is now the official Boy Scouts of America source on advancement policies and procedures.

- [Inside front cover, and 5.0.1.4] — **Unauthorized Changes to Advancement Program**

No council, committee, district, unit, or individual has the authority to add to, or subtract from, advancement requirements. (There are limited exceptions relating only to youth members with disabilities. For details see section 10, “Advancement for Members With Special Needs”.)

- [Inside front cover, and 7.0.1.1] — The [‘Guide to Safe Scouting’](#) Applies

Policies and procedures outlined in the ‘Guide to Safe Scouting’, No. 34416, apply to all BSA activities, including those related to advancement and Eagle Scout service projects. [Note: Always reference the online version, which is updated quarterly.]

- [7.0.3.1] — **The Buddy System and Certifying Completion**

Youth members must not meet one-on-one with adults. Sessions with counselors must take place where others can view the interaction, or the Scout must have a buddy: a friend, parent, guardian, brother, sister, or other relative—or better yet, another Scout working on the same badge—along with him attending the session. When the Scout meets with the counselor, he should bring any required projects. If these cannot be transported, he should present evidence, such as photographs or adult certification. His unit leader, for example, might state that a satisfactory bridge or tower has been built for the Pioneering merit badge, or that meals were prepared for Cooking. If there are questions that requirements were met, a counselor may confirm with adults involved. Once satisfied, the counselor signs the blue card using the date upon which the Scout completed the requirements, or in the case of partials, initials the individual requirements passed.

- [7.0.3.2] — **Group Instruction**

It is acceptable—and sometimes desirable—for merit badges to be taught in group settings. This often occurs at camp and merit badge midways or similar events. Interactive group discussions can support learning. The method can also be attractive to “guest experts” assisting registered and approved counselors. Slide shows, skits, demonstrations, panels, and various other techniques can also be employed, but as any teacher can attest, not everyone will learn all the material.

There must be attention to each individual’s projects and his fulfillment of *all* requirements. We must know that every Scout—actually and *personally*—completed them. If, for example, a requirement uses words like “show,” “demonstrate,” or “discuss,” then every Scout must do that. It is unacceptable to award badges on the basis of sitting in classrooms *watching* demonstrations, or remaining silent during discussions. Because of the importance of individual attention in the merit badge plan, group instruction should be limited to those scenarios where the benefits are compelling.

- [7.0.3.3] — **Partial Completions**

Scouts need not pass all requirements with one counselor. The Application for Merit Badge has a place to record what has been finished—a “partial.” In the center section on the reverse of the blue card, the counselor initials for each requirement passed. In the case of a partial completion, he or she does not retain the counselor’s portion of the card. A subsequent counselor may choose not to accept partial work, but this should be rare. A Scout, if he believes he is being treated unfairly, may work with his Scoutmaster to find another counselor. An example for the use of a signed partial would be to take it to camp as proof of prerequisites. Partials have no expiration except the 18th birthday.--