



# COMPUTERS

## Merit Badge Requirements

- 1) Give a short history of computers. Describe the major parts of a computer system. Give four different uses of computers.
- 2) Do the following:
  - A) Tell what a program is and how it is developed.
  - B) Give three examples of programming languages and what types of programming they are used for.
  - C) Describe a source program and an object program.
- 3) Show how the following may be stored in computer memory: text, numbers, pictures, and sound.
- 4) Do THREE of the following:
  - A) Use a database manager to create a troop roster, providing name, rank, patrol, and telephone number of each Scout. Sort the register by rank, by patrol, and alphabetically by name.
  - B) Use a spreadsheet program to develop a weekend campout food budget for your patrol.
  - C) Use a word processor to write a letter to parents of your troop's Scouts, inviting them to a court of honor. Use the 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.
- 5) Do TWO of the following:
  - A) Visit a business or industry that uses computers. Study what the computer accomplishes and be prepared to discuss what you observed.
  - B) Use a computer attached to a local area network or equipped to a modem to connect to a computer network or bulletin-board service such as Prodigy, CompuServe, or America Online. Send a message to someone on the network or download a program or file from the network.
  - C) Use a general-purpose programming language to write a program application of your choice, subject to approval by your counselor.
- 6) Be prepared to discuss several terms used in each of the following categories:
  - A) Input/output devices
  - B) Storage Media
  - C) Memory
  - D) Processors and coprocessors
  - E) Modems
  - F) Networks
  - G) Electronic Mail
  - H) Robotics
- 7) Be prepared to discuss various jobs in the computer field.
- 8) Is it permissible to accept a free copy of a computer game or program from a friend? Why or why not?
- 9) Describe several ways in which you and your family could use a personal computer other than for games and recreation.

### Requirement 1

Give a brief history of computers: \_\_\_\_\_

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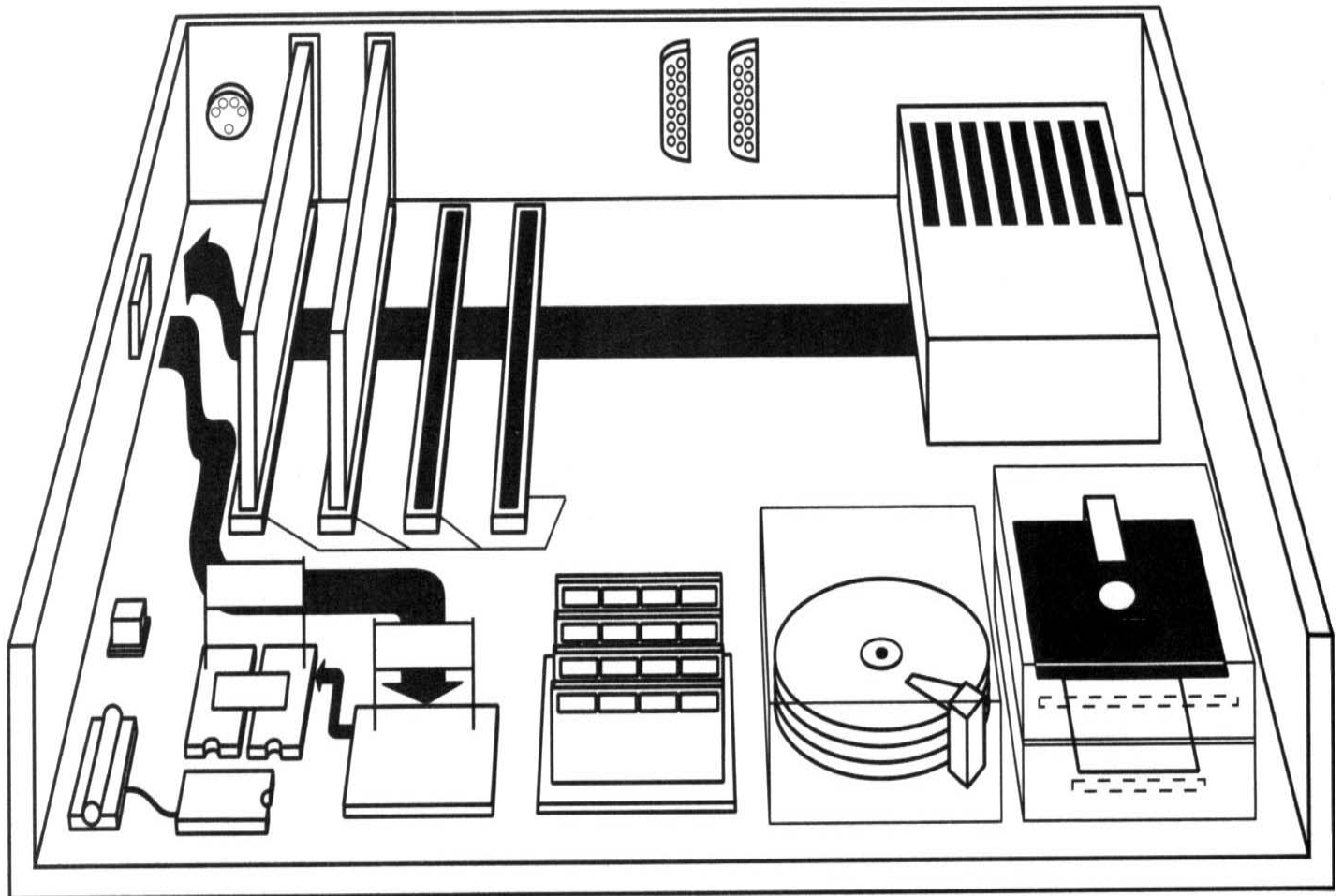
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Using the picture below, label the major parts of a computer system. (the Merit Badge Pamphlet shows at least 10).



You have just labeled the major parts of the computers CPU (Central Processing Unit). Can you name at least three other major parts of the computer that are not part of the CPU? (not required for merit badge).

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Scout Name: \_\_\_\_\_ Unit #: \_\_\_\_\_ Date: \_\_\_\_\_

Now that you have identified the major parts of a computer system, use the area below to name the part and describe its main function.

Part Name: \_\_\_\_\_

Main Function: \_\_\_\_\_  
\_\_\_\_\_

Part Name: \_\_\_\_\_

Main Function: \_\_\_\_\_  
\_\_\_\_\_

Part Name: \_\_\_\_\_

Main Function: \_\_\_\_\_  
\_\_\_\_\_

Part Name: \_\_\_\_\_

Main Function: \_\_\_\_\_  
\_\_\_\_\_

Part Name: \_\_\_\_\_

Main Function: \_\_\_\_\_  
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Part Name: \_\_\_\_\_

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Part Name: \_\_\_\_\_

Main Function: \_\_\_\_\_  
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Part Name: \_\_\_\_\_

Main Function: \_\_\_\_\_  
\_\_\_\_\_

Part Name: \_\_\_\_\_

Main Function: \_\_\_\_\_  
\_\_\_\_\_

Scout Name: \_\_\_\_\_ Unit #: \_\_\_\_\_ Date: \_\_\_\_\_

Give four different uses of computers:

Use 1: \_\_\_\_\_

Use 2: \_\_\_\_\_

Use 3: \_\_\_\_\_

Use 4: \_\_\_\_\_

## Requirement 2

Describe what a program is: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

How is a program developed? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Use the area below to list three examples of programming languages and what types of programming they are used for.

Programming Language: \_\_\_\_\_

What is this programming language used for? \_\_\_\_\_

\_\_\_\_\_

Programming Language: \_\_\_\_\_

What is this programming language used for? \_\_\_\_\_

\_\_\_\_\_

Programming Language: \_\_\_\_\_

What is this programming language used for? \_\_\_\_\_

\_\_\_\_\_

What is a source program? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

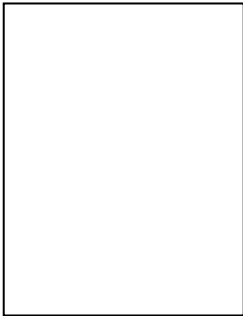
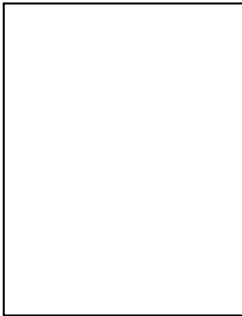
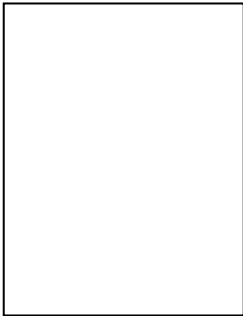

What is an object program? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### Requirement 3

In the following areas show how text, numbers, pictures, and sound may be stored in computer memory:

TEXT	NUMBERS	PICTURES	SOUND
			

### Requirement 4

For this requirement you are asked to select three items from a list of four items to complete. These items require that you use a Database Manager, Spreadsheet, Word Processor, or a Computer Graphics program in order to complete them. Select the three items that you wish you complete and do them. When you have completed them show or demonstrate them to your counselor.

Which requirements did you choose? 4A 4B 4C 4D

If printable, print your projects and attach the papers to the back of this worksheet.

### Requirement 5

You have been given three options for this requirement. Select and complete two of them.

If you selected *Option A*:

What business or industry did you visit that uses computers? \_\_\_\_\_

What does the computer accomplish at this business or in this industry? \_\_\_\_\_

Give a brief summary of your visit and what you observed: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If you selected *Option B*:

What computer network or bulletin-board service did you use for this requirement? \_\_\_\_\_

Who did you send a message to or what program/file did you download? \_\_\_\_\_

If you selected *Option C*:

\*Make sure you get approval for your program before you begin writing it.

What general-purpose programming language did you use to write a program with? \_\_\_\_\_

Describe the program you wrote and also tell why you wrote it: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Show your program to your counselor. If you get the chance, share your program with your Scout unit also.

### Requirement 6

This requirement asks that you prepare yourself to be familiar with and able to discuss several terms used in several computer related categories. Use the area below to make notes and list the terms associated with each category. Discuss these terms with your counselor.

Input/Output Devices: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Storage Media: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Memory: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Processors & Coprocessors: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Modems: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Networks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Electronic Mail: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Robotics: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Requirement 7

In the world today there are literally thousands upon thousands of jobs and occupations that relate to and rely on computers. Do some investigating on your own and find out what some of these jobs are. Find out the demand for the job and what it pays. Also find out what kind of an education is needed for the job. When you are finished with this requirement you should be able to discuss with your counselor the various jobs in the computer field. Below you will find enough space to list three jobs, but use this opportunity to find out about several computer related jobs. You may want to ask your counselor how many they would like you to investigate.

Job: \_\_\_\_\_

Details: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Job: \_\_\_\_\_

Details: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Scout Name: \_\_\_\_\_ Unit #: \_\_\_\_\_ Date: \_\_\_\_\_

Job: \_\_\_\_\_

Details: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Requirement 8

Is it permissible to accept a free copy of a computer game or program from a friend? \_\_\_\_\_

Why or why not? If there are specific laws, describe them and also tell why you think that the laws are in place: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Do you know the punishment(s) for breaking any of these laws? If so, what are they? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What should you do if you are aware of someone breaking the law(s) related to software piracy? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

### Requirement 9

List several ways that you and your family can use a personal computer other than for games and recreation:

Use: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Use: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Use: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Use: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_