PROGRAMMING MERIT BADGE REQUIREMENTS

Additional checkoff sheets and helps are available from ScouterMom.com.

1. Safety. Do the following:										
1a. Show your counselor your current, up-to-date Cyber Chip.										
1b. Discuss first aid and prevention for potential injuries, such as eyestrain and repetitive stress injuries, that could occur during programming activities										
2. History. Do the following:										
2a. Discuss with your counselor the history of programming and programming languages, and discuss how programming languages have evolved over time to become easier to use while adding additional capabilities										
2b. Discuss with your counselor the history of programming and the evolution of programming languages.										
3. General knowledge. Do the following:										
3a. Create a list of 10 popular programming languages in use today and describe which industry or industries they are primarily used in and why.										
3b. Describe three different programmed devices you rely on every day										
4. Intellectual property. Do the following:										
4a. Explain the four types of intellectual property used to protect computer programs.										
4b. Describe the difference between licensing and owning software.										
4c. Describe the differences between freeware, open source, and commercial software, and why it is important to respect the terms of use of each.										
5. Projects. Do the following:										
5a. With your counselor’s approval, choose a sample program. Modify the code or add a function or subroutine to it. Debug and demonstrate the modified program to your counselor.										
5b. With your counselor’s approval, choose a second programming language and development environment, different from those used for requirement 5a and in a different industry from 5a. Then write, debug, and demonstrate a functioning program to your counselor, using that language and environment.										
5c. With your counselor’s approval, choose a third programming language and development environment, different from those used for requirements 5a and 5b and in a different industry from 5a or 5b. Then write, debug, and demonstrate a functioning program to your counselor, using that language and environment										

5d. Explain how the programs you wrote for requirements 5a, 5b, and 5c process inputs, how they make decisions based on those inputs, and how they provide outputs based on the decision making										
6. Careers. Find out about three career opportunities that require knowledge in programming. Pick one and find out the education, training, and experience required. Discuss this with your counselor and explain why this career might be of interest to you.										
Completed										
Presented										