

3. General knowledge. - Do the following:

- a. Create a list of 10 popular programming languages in use today and describe which industry or industries they are primarily used in and why.

	Language	Industry	Why is it used?
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

- b. Describe three different programmed devices you rely on every day.

1.	
2.	
3.	

4. Intellectual property. - Do the following:

- a. Explain the four types of intellectual property used to protect computer programs.

- b. Describe the difference between licensing and owning software.

- c. 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:

- a. 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..

The Programming merit badge website, <http://www.scoutlife.org/programming>, has a number of sample programs that you could use for requirement 5a. However, you have the option of finding a program on your own. It's a good idea to seek your merit badge counselor's guidance.

Language	
Environment	
Industry	
Program:	

- d. 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.

1.	
2.	
3.	

- Pick one and find out the education, training, and experience required.

Career	
Education	
Training	
Experience	

- Discuss this with your counselor and explain why this career might be of interest to you.

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Scouts BSA Cyber Chip Workbook



This Workbook can help you organize your thoughts as you prepare to meet with your counselor. You still must satisfy your counselor that you can demonstrate each skill and have learned the information. You should use the work space provided for each requirement to keep track of which requirements have been completed, and to make notes for discussing the item with your counselor, not for providing full and complete answers. If a requirement says that you must take an action using words such as "discuss", "show", "tell", "explain", "demonstrate", "identify", etc, that is what you must do.

Merit Badge Counselors may not require the use of this or any similar workbooks.

No one may add or subtract from the official requirements found in Scouts BSA Requirements (Pub. 33216 – SKU 653801).

The requirements were last issued or revised in 2020 • This workbook was updated in May 2022.

Scout's Name: _____ Unit: _____

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

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

Please submit errors, omissions, comments or suggestions about this **workbook** to: Workbooks@USScouts.Org
 Comments or suggestions for changes to the **requirements** for the **award** should be sent to: Advancement.Team@Scouting.Org

A. Cyber Chip Requirements for Grades 6-8

- 1. Read and sign the Level II Internet Safety Pledge on the BSA Cyber Chip card. (BSA Cyber Chip green card; can be ordered at www.scoutshop.org.)

Internet Safety Pledge	
1.	I will think before I post
2.	I will respect other people online
3.	I will respect digital media ownership
4.	I won't meet face-to-face with anyone I meet in the digital world unless I have my parent's permission
5.	I will protect myself online.

- 2. Write and sign a personalized contract with your parent or guardian that outlines rules for using the computer and mobile devices, including what you can download, what you can post, and consequences for inappropriate use.

General comments

What I can download

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What I can post

Consequences for inappropriate use

3. Watch the video "Friend or Fake" (www.nsteens.org/Videos/FriendOrFake), along with two additional videos of your choosing (www.nsteens.org/Videos/FriendOrFake) from the list below, to see how friends can help each other to stay safe online.

- Post to be Private (youtu.be/mBsoODqfQgA)
- Split Decisions (youtu.be/HLUv8Dht_R4)
- Two Kinds of Stupid (youtu.be/T6ulH2bWCnY)

	Video Name	Date Watched
<input type="checkbox"/>	Friend or Fake?	
<input type="checkbox"/>		
<input type="checkbox"/>		

4. As an individual or with your patrol, use the EDGE method to teach internet safety rules, behavior, and "netiquette" to your troop or another patrol. You are encouraged to use any additional material and information you have researched. Each member of the patrol must have a role and present part of the lesson.

5. Discuss with your unit leader the acceptable standards and practices for using allowed electronic devices, such as phones and games, at your meetings and other Scouting events.

B. Cyber Chip Requirements for Grades 9-12

- 1. Read and sign the Level II Internet Safety Pledge on the BSA Cyber Chip card. (BSA Cyber Chip green card; can be ordered at www.scoutshop.org.)

Internet Safety Pledge

1. I will think before I post
2. I will respect other people online
3. I will respect digital media ownership
4. I won't meet face-to-face with anyone I meet in the digital world unless I have my parent's permission
5. I will protect myself online.

- 2. Write and sign a personalized contract with your parent or guardian that outlines rules for using the computer and mobile devices, including what you can download, what you can post, and consequences for inappropriate use.

General comments	
What I can download	
What I can post	
Consequences for inappropriate use	

Note: All Cyber Chips will expire annually. Each Scout will need to go to Netsmartz (www.netsmartz.org) and complete two new resources to recommit to net safety and netiquette. Then, with the unit leader, the Scout can add the new date to the Cyber Chip card or certificate.

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Geocaching

Merit Badge Workbook



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

This Workbook can help you organize your thoughts as you prepare to meet with your merit badge counselor.

You still must satisfy your counselor that you can demonstrate each skill and have learned the information.

You should use the work space provided for each requirement to keep track of which requirements have been completed, and to make notes for discussing the item with your counselor, not for providing full and complete answers.

If a requirement says that you must take an action using words such as "discuss", "show", "tell", "explain", "demonstrate", "identify", etc, that is what you must do.

Merit Badge Counselors may not require the use of this or any similar workbooks.

No one may add or subtract from the official requirements found in Scouts BSA Requirements (Pub. 33216 – SKU 653801).

The requirements were last issued or revised in 2019 • This workbook was updated in June 2020.

Scout's Name: _____ Unit: _____

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

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

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Comments or suggestions for changes to the **requirements** for the **merit badge** should be sent to: Merit.Badge@Scouting.Org

1. Do the following:

- a. Explain to your counselor the most likely hazards you may encounter while participating in geocaching activities and what you should do to anticipate, help prevent, mitigate, and respond to these hazards.

Hazard:	
Anticipate & Prevent:	
Mitigate & Respond:	

Hazard:	
Anticipate & Prevent:	
Mitigate & Respond:	

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Hazard:	
Anticipate & Prevent:	
Mitigate & Respond:	

Hazard:	
Anticipate & Prevent:	
Mitigate & Respond:	

Hazard:	
Anticipate & Prevent:	
Mitigate & Respond:	

- b. Discuss first aid and prevention for the types of injuries or illnesses that could occur while participating in geocaching activities, including cuts, scrapes, snakebite, insect stings, tick bites, exposure to poisonous plants, heat and cold reactions (sunburn, heatstroke, heat exhaustion, hypothermia), and dehydration.

Cuts:

Scrapes:

Snakebite:

Insect stings:

Tick bites:

Exposure to
poisonous
plants:

Sunburn:

Heatstroke:

Geocaching

Scout's Name: _____

Cache:

Accuracy:

Difficulty ratings:

Terrain ratings:

Attributes:

Trackable:

Choose five additional terms to explain to your counselor.

1.

Geocaching

Scout's Name: _____

2.		
3.		
4.		
5.		

4. Explain how the Global Positioning System (GPS) works.

c Then, using Scouting's Teaching EDGE, demonstrate the use of a GPS unit to your counselor. Include marking and editing a waypoint, changing field functions, and changing the coordinate system in the unit.

5. Do the following:

c a. Show you know how to use a map and compass and explain why this is important for geocaching.

7. With your parent's permission*, go to www.geocaching.com. Type in your city and state to locate public geocaches in your area. Share the posted information about three of those geocaches with your counselor.

C 1.		
C 2.		
C 3.		
C	Then, pick one of the three and find the cache.	

*To fulfill this requirement, you will need to set up a free user account with www.geocaching.com. Ask your parent for permission and help before you do so.

8. Do ONE of the following:

C a. If a Cache to Eagle® series exists in your council, visit at least three of the 12 locations in the series. Describe the projects that each cache you visit highlights, and explain how the Cache to Eagle® program helps share our Scouting service with the public.

1.	
Project	
2.	
Project	
3.	
Project	

Explain how the Cache to Eagle® program helps share our Scouting service with the public.

- b. Create a Scouting-related Travel Bug® that promotes one of the values of Scouting.
- "Release" your Travel Bug into a public geocache and, with your parent's permission, monitor its progress at www.geocaching.com for 30 days. Keep a log, and share this with your counselor at the end of the 30-day period.
- c. Set up and hide a public geocache, following the guidelines in the Geocaching merit badge pamphlet. Before doing so, share with your counselor a three-month maintenance plan for the geocache where you are personally responsible for those three months.
- After setting up the geocache, with your parent's permission, follow the logs online for 30 days and share them with your counselor.
- You must archive the geocache when you are no longer maintaining it.
- d. Explain what Cache In Trash Out (CITO) means, and describe how you have practiced CITO at public geocaches or at a CITO event.

Then, either create CITO containers to leave at public caches, or host a CITO event for your unit or for the public.

- 9. Plan a geohunt for a youth group such as your troop or a neighboring pack, at school, or your place of worship. Choose a theme, set up a course with at least four waypoints, teach the players how to use a GPS unit, and play the game.

Theme

--

- Set up a course

Waypoints:

1.

2.

Geocaching

Scout's Name: _____

3.

4.

- Teach the players how to use a GPS unit
- Play the game.

Tell your counselor about your experience, and share the materials you used and developed for this event.

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