

## MERIT BADGES

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### NOTE

Some pre-requisites require the Scout to contact the Merit Badge Counselor.

**Don't forget that two-deep leadership requirements apply to all contact.** Be it by phone, text, email or other, include a parent/guardian/Scoutmaster.

When a Scout emails through their parent's/guardian's email account, they must copy a second parent/guardian/Scoutmaster on emails to ensure two-deep leadership is maintained.

## AMERICAN HERITAGE

### Session 1:

#1

#3 (a) [we will discuss social media in class] and  
(b), &

#4

### Session 2:

#2 (a) [we will discuss Theodore Roosevelt and Gifford Pinchot in class], &  
(b) [we will discuss the League of Women Voters in class], #3c, 5 and 6.

## ART

None

## ASTRONOMY

4c. Make two sketches of the Big Dipper. In one sketch, show the Big Dipper's orientation in the early evening sky. In another sketch, show its position several hours later. In both sketches, show the North Star and the horizon. Record the date and time each sketch was made.

5b. Using the Internet (with your parent's permission), books, and other resources, find out when each of the five most visible planets that you identified in requirement 5a will be observable in the evening sky during the next 12 months, then compile this information in the form of a chart or table.

5d. Observe a planet and describe what you saw.

6a. Sketch the face of the Moon and indicate at least five seas and five craters. Label these landmarks.

6b. Sketch the phase and the position of the Moon at the same hour and place, for four nights within a one-week period. Include landmarks on the horizon such as hills, trees, and buildings. Explain the changes you observe.

1. Find out about three career opportunities in astronomy. Pick one and find out the education, training, and experience required for this profession.

Discuss this with your counselor and explain why this profession might interest you.

## 8. THIS WILL BE DONE BETWEEN SESSIONS:

With your counselor's approval and guidance, do ONE of the following:

- a. Visit a planetarium or astronomical observatory. Submit a written report, a scrapbook, or a video presentation afterward to your counselor that includes the following information:
  1. Activities occurring there
  2. Exhibits and displays you saw
  3. Telescopes and instruments being used
  4. Celestial objects you observed.
- b. (b) Plan and participate in a three-hour observation session that includes using binoculars or a telescope. List the celestial objects you want to observe and find each on a star chart or in a guidebook. Prepare a log or notebook. Discuss with your counselor what you hope to observe prior to your observation session. Review your log or notebook with your counselor afterward.\*\*

## AVIATION

(6 per class)

**REMINDER:** Aviation Merit Badge will meet at the Capital City Airport, located at 210 Airport Road, New Cumberland, PA.

- Looking at the requirements, the Scouts need to **write up and have with them when we meet**, the answers to the following questions:

1. A - E
- 5.

I do not want them to send it to me by email but have it with them when we meet.

- We will do 2. B & C at the airport.
- Must do 3. A or B before we meet. 3.B requirement might be hard with COVID. However, with Zoom, anything is possible.
- We will satisfy 4.A by the Scouts coming to the airport.

I will not give credit to any Scout who does not have the written material with him or her. There is more than enough time to get the answers written down before we meet in March or April.

## CAMPING

TBD

# 4b, 8c, 8d and 9 will NOT be covered at the MBC.

#3 and 4a must be done and brought into the first class.

3 Make a written plan <sup>1</sup> for an overnight trek and show how to get to your camping spot by using a topographical map and one of the following:

- a. A compass
- b. A GPS receiver <sup>2</sup>
- c. A smartphone with a GPS app <sup>2</sup>.

4 Do the following:

- a. Make a duty roster showing how your patrol is organized for an actual overnight campout. List assignments for each member.

## DIGITAL TECHNOLOGY

Bring your up to date CYBERCHIP to the first class

## DISABILITY AWARENESS MERIT BADGE

Req 2: Visit an Agency

1. Collect and read information about the agency and what they do.
2. Learn about opportunities members have for training, employment and education.
3. Possible things to find out:
  - A. Physical Therapy
  - B. Speech Therapy
  - C. Occupational Therapy
  - D. Educational Programs
  - E. Skills Trainings
  - F. Employment Training

Req 3: Do 2 of the following:

1. Talk to a Scout with a disability and learn about his/her experiences taking part in the program and with merit badges.
2. Talk to an individual with a disability and learn about their experiences and their activities.

3. Learn how people participate in adaptive sports and other recreational activities.

4. Learn about independent living aides:

Req 4: Visit 2 and record how accessible it is to people with a disability.

List 5 ways to improve the site and positive things they are doing correctly.

-Some ideas of places to visit:

- A. Your School
- B. A place of worship
- C. You Scout camp site
- D. Your Scout meeting location
- E. Public exhibit:
  - a. park
  - b. theater
  - c. museum

Req 7: Careers: Pick one of interest and find out the education, training and experience needed.

## ENERGY

1. Do the following:
  - a. Find With your parent's permission, use the internet to find a blog, podcast, website, or an article on the use or conservation of energy. Discuss with your counselor what details in the article were interesting to you, the questions it raises, and what ideas it addresses that you do not understand.
2. Show you understand energy forms and conversions by doing the following:
  - a. Explain how THREE of the following devices use energy, and explain their energy conversions: toaster, greenhouse, lightbulb, bow drill, cell phone, nuclear reactor, sweat lodge.

## GAME DESIGN

8b. List three career opportunities in game development. Pick one and find out about the education, training, and experience required for the profession. Discuss this with your counselor. Explain why this profession might interest you.

## OCEANOGRAPHY

1. Name four branches of oceanography. Describe at least five reasons why it is important for people to learn about the oceans.

## PERSONAL MANAGEMENT

*Do not begin these until after your blue card is signed.*

1. Obtain a copy of the merit badge handbook and read it.
2. Complete requirement 1. Email to get your purchase idea approved. Note that the requirement includes a discussion with the family regarding how the major purchase will be paid for; please bring a note signed by a parent that you have had this discussion. The shopping strategy should include comparison of 3-5 items, and prices for one specific item from at least 2 stores.
3. For requirement 2, prepare a monthly income and expense plan, and begin tracking all income and expenses starting no later than January 1. (The counselor will check on your progress on this at MBC.)
4. Be prepared to discuss the concepts or take a written test on requirements 3, 4, 6 and 7 at MBC. (You will be allowed to use the merit badge pamphlet or any notes you would like to make beforehand.)
5. Complete requirement 5 and be prepared to present the information you collected on your stocks to the group.
6. Complete requirement 8: one-week time management activity. Please note that the requirement includes three items: a prioritized "to do" list, a schedule to be created before the week that you track your activities, and a journal of how you actually spent your time. **The requirement is not complete if all three of these items are not presented!**
7. Bring an idea for your project plan (*requirement 9*) to MBC, but do not complete the project plan. The counselor will discuss your project plan with you at MBC and will schedule a time to meet with you after MBC so you can present your final project plan.
8. Complete *requirement 10*. Be prepared to discuss:
  1. What interests you about this career
  2. What the advantage or disadvantages of this career might be
  3. What are the education and training requirements of this career

4. Who might employ a person that works in this field
5. What skills, talents, or personality traits a person working in this field should have

## PUBLIC HEALTH

Be prepared to actively participate in discussions

3 ...demonstrate two ways for making water safe to drink that can be used while at camp

Provide note from Scoutmaster or Assistant Scoutmaster stating Scout demonstrated two ways for making water safe to drink

5 Virtual visit will be accepted in lieu of physical visit. We will be discussing virtual visit during the session

Options (feel free to find own that covers questions in requirement):

Food service: <https://youtu.be/TU1VhCyyC6g>

water treatment: <https://www.youtube.com/watch?v=GUBRRXzYXpl>

solid waste management: <https://www.youtube.com/watch?v=Ms8qA9gTugg>

7a or 7b. We will discuss i, ii, and iii in requirement 7 during session

## PULP AND PAPER

- 6 Make a list of 15 pulp or paper products found in your home. Share examples of 10 such products with your counselor.
- 7 With your parent's and counselor's approval, do ONE of the following:
  - a. Visit a pulp mill. Describe how the mill converts wood to cellulose fibers.
  - b. Visit a paper mill and get a sample of the paper made there. Describe the processes used for making this paper. Tell how it will be used.
  - c. Visit a container plant or box plant. Describe how the plant's products are made.
  - d. Visit a recycled paper collection or sorting facility. Describe the operations there.

- e. Using books, magazines, your local library, the Internet (with your parent's permission), and any other suitable research tool, find out how paper products are developed. Find out what role research and development play in the papermaking industry. Share what you learn with your counselor.
- 8 Find out about three career opportunities in the papermaking industry that interest you. Pick one and find out the education, training, and experience required for this profession. Discuss this with your counselor and explain why this profession might interest you.

## RADIO

2a - Sketch a diagram showing how radio waves travel locally and around the world.

3. Do the following:

- a. Draw a chart of the electromagnetic spectrum covering 300 kilohertz (kHz) to 3,000 megahertz (MHz).

- b. Label the MF, HF, VHF, UHF, and microwave portions of the spectrum on your diagram.

- c. Locate on your chart at least eight radio services such as AM and FM commercial broadcast, citizens band (CB), television, amateur radio (at least four amateur radio bands), and public service (police and fire).

5a - Explain the differences between a block diagram and a schematic diagram.

5b - Draw a block diagram for a radio station that includes a transceiver, amplifier, microphone, antenna, and feed line.

8. Find out about three career opportunities in radio. Pick one and find out the education, training, and experience required for this profession. Discuss this with your counselor and explain why this profession might interest you.

Requirement 7 involves a trip to a radio station that has been approved by the parent and counselor. The Scout can either do this on his own, or I can arrange for a field trip to a local station to take place in between sessions. I will ask when I send out the introductory email.

Robin Cartwright (717) 422-1349 is my cell phone. Shoot me a text! (Don't forget to include parent/guardian/Scoutmaster on the text as well.)



## RAILROADING

None but we will be doing option 8a **Model Railroading**

## SCOUTING HERITAGE

Scouts prior to the Scouting Heritage MB sessions please obtain access to, borrow or buy a copy of the Scouting Heritage Merit Badge pamphlet. Much of this merit badge is understanding the great history of Scouting and the associated programs and most can be found in that MB pamphlet or in the references at the end of the MB pamphlet.

Requirement 2: Prepare the two (2) biographical summaries and be prepared to give the summary at the MB session and be prepared to discuss 2 (b).

Requirement #4. Complete one (1) of the tasks (a), (b) or (c).

- (a) is self-explanatory and you will need to bring your journal as reference when you report to me what you did, saw and learned.
- (b) Either visit the Scouting Heritage Museum, at Philmont Scout Ranch or write a letter / email to obtain information about the facility and give a short report on what you think the role of this museum is in the Scouting program. (See the "Bryan on Scouting newsletter" at <https://blog.scoutingmagazine.org/2017/04/06/new-procedure-completing-scouting-heritage-mb-requirement-4b/>). Essentially you can write or email the Philmont Museums for Scouting Heritage information. Key to completing (b) is that you bring to the MB Session the response received from your request to show along with your report. Scouts you must include the following information: first and last name, current Scout rank and your home mailing address. Send the letter, with your parent's permission, either by email to ([philmont.museums@scouting.org](mailto:philmont.museums@scouting.org)) or via regular mail to: Scouting Heritage Merit Badge Request, Philmont Museums, 17 Deer Run Road, Cimarron, NM 87714. Please verify that your Scout information appears legible (can be read easily) and is correct / accurate; a number of letters every year are received where the Scout's information isn't legible or is inaccurate. You will receive a letter, fact sheet, and brochure, which can be used to prepare your report, and as proof that you followed the above procedure. **Scouts allow at least three weeks (maybe more) for a response** - that means YOU MUST do this several weeks in advance of the first MB Session, March 12, 2022.

(c) Visit an exhibit of Scouting memorabilia or local museum with a Scouting history gallery - BUT FIRST get my permission to visit –

Requirement #5. Have your Scoutmaster provide confirmation that you completed the required interview of two people and developed a report that you presented to your patrol, troop or at a Court of Honor and added to your troop's library. This confirmation can be an email from the Scoutmaster directly to me or a signed statement / letter to me from the Scoutmaster stating that you have completed requirement 4 (c). If you need help or guidance, give me a call or shoot me an email (cc another adult as well).

Requirement #6. Bring your collection of Scouting memorabilia to show me and share with the others in the MB session.

Requirement #7. If you pick an old-time Scouting game from the Scouting Heritage Merit Badge pamphlet, be prepared to teach the game with the other MB participants. (If you are considering using an old-time Scouting game NOT found in the Scouting Heritage MB pamphlet, call me before the first MB session for my permission to use the game - be prepared to tell me what the game is, where you found the reference for the game (came from), etc.

Requirement #8. Your interview of three (3) people should NOT include the two (2) you interviewed for requirement #5 above and they MUST be over the age of 40 and were Scouts. Be prepared to share with me at the MB session what you learned.

Questions about the prerequisites or need more guidance give me a call, email or text before the first session. (Always cc/copy another adult when you contact me by any method.)

## SKATING

(6 per class)

**REMINDER:** Skating Merit Badge will meet at Twin Ponds East (3904 Corey Rd, Harrisburg, PA 17109). It will ONLY meet on 3/12/22.

None

## STAMP COLLECTING

Read and bring the MB pamphlet with you

Bring any stamp collection you have

## SUSTAINABILITY

1. Please make sure to obtain a copy of the latest Sustainability MB Pamphlet and review ALL the requirements closely. You can find them online at: [https://filestore.scouting.org/filestore/Merit\\_Badge\\_RegandRes/Sustainability.pdf](https://filestore.scouting.org/filestore/Merit_Badge_RegandRes/Sustainability.pdf). Only if you find it helpful should you use one of the various MB worksheets for completing the badge.
2. Pre-requisites that must be completed prior to the first MB College meeting:
  - Requirement 1
  - Requirement 2 – Water – A
  - Requirement 2 – Food – A
  - Requirement 2 – Community – B
  - Requirement 2 – Energy – B
  - Requirement 2 – Stuff – A

For each of these write up your results, put your name and which requirement it is at the top of the page. I will collect these to read before the 2<sup>nd</sup> MB College meeting. Be sure to bring your Blue Card and a writing utensil to this meeting.

## WELDING

The Worksheet ( found on <http://usscouts.org/usscouts/mb/mb148.asp> ) needs to be completed by the first weekend so we can do a quick review of it and get to actual welding. The hands-on portion of the badge will be MIG welding .

You will need:

- Safety glasses with side shields (if they have glasses they will need a pair that go over).
- Cotton pants/denim jeans, no poly or nylon. Most Scout pants will light up pretty quick. I have welding gloves and fireproof jackets to cover shirts.
- Leather boots or shoes. Sparks will go right through cloth shoes.