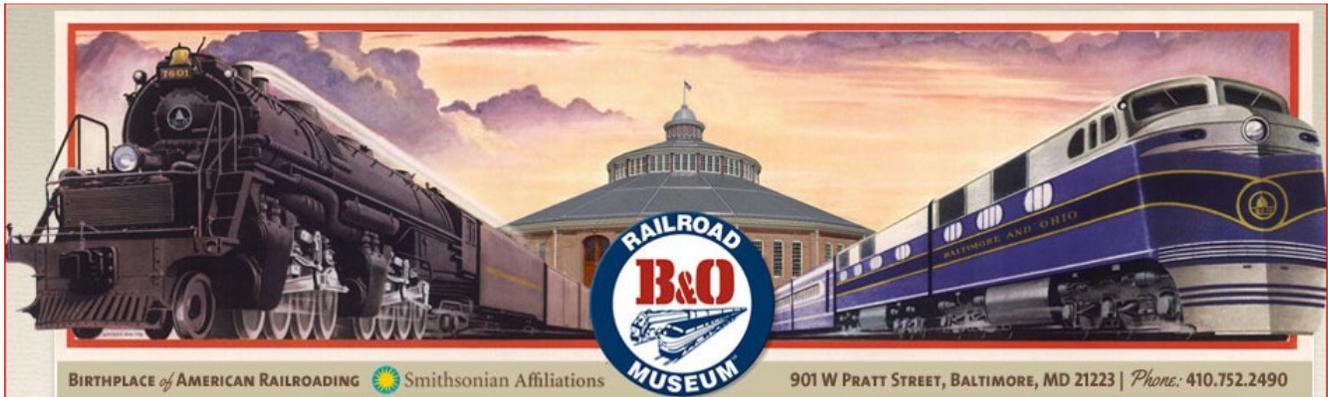


## T-255's Railroad Merit Badge Class Wednesday, October 9, 2019



Montgomery County Public Schools are closed Wednesday, October 9, 2019.  
So... what are you going to do?

Earn the BSA Railroad Merit Badge!

This class will cover all requirements. Two of the requirements involve a field trip. First, a visit to the birthplace of US railroads – the B&O Railroad Museum. Second, Scouts will purchase tickets and ride the MARC to College Park.

### Class Requirements:

**Registered T/C-255 Scouts.** Minimum of 6 Scouts and 2 Adults

**Costs:** Total \$40 per Scout, not including lunch, split as follows:

- a) Age 13+ \$20/ under 13 \$12 for B&O Museum
- b) \$7 cash for train ticket from Camden Yards to College Park (the MB requirement is for each Scout to purchase their own train ticket)
- c) \$10 paid to T-255 for transportation and adults
- d) bag lunch or lunch money

**Print out the Railroad MB workbook** attached to this flyer, or located here:

<http://usscouts.org/usscouts/mb/worksheets/Railroading.pdf>

**When:** Wednesday, October 9, 2019, 8:30 am at the Pierce house, 7200 45<sup>th</sup> St., Chevy Chase, Md, 20815. Class starts 9:00 am sharp. Return @ 5:30 pm.

**Deadline:** Tuesday, October 8, 2019.

**Contact** for information: Keith Pierce, ASM, 301-219-5790 or Sara Kirk, CAA, 301-938-8086

## Railroading merit badge requirements

### Requirements in RED to be covered in the T/C-255 Class

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1. Do THREE of the following:
  - (a) Name three types of modern freight trains. Explain why unit trains are more efficient than mixed freight trains.
  - (b) Name one Class I or regional railroad. Explain what major cities it serves, the locations of major terminals, service facilities and crew change points, and the major commodities it carries.
  - (c) Using models or pictures, identify 10 types of railroad freight or passenger cars. Explain the purpose of each type of car.
  - (d) Explain how a modern diesel or electric locomotive develops power. Explain the terms dynamic braking and radial steering trucks.
2. Do the following:
  - (a) Explain the purpose and formation of Amtrak. Explain, by the use of a timetable, a plan for making a trip by rail between two cities at least 500 miles apart. List the times of departure and arrival at your destination, the train number and name, and the type of service you want.
  - (b) List and explain the various forms of public/mass transit using rail.
3. Do ONE of the following:
  - (a) Name four departments of a railroad company. Describe what each department does.
  - (b) Tell about the opportunities in railroading that interest you most and why.
  - (c) Name four rail support industries. Describe the function of each one.
  - (d) With your parent's and counselor's approval, interview someone employed in the rail industry. Learn what that person does and how this person became interested in railroading. Find out what type of schooling and training are required for this position.
4. Explain the purpose of Operation Lifesaver and its mission.
5. Do THREE of the following:
  - (a) List five safety precautions that help make trains safer for workers and passengers.
  - (b) Explain to your merit badge counselor why safety around rights-of-way is important.
  - (c) List 10 safety tips to remember when you are near a railroad track (either on the ground or on a station platform) or aboard a train.
  - (d) Tell your counselor about the guidelines for conduct that should be followed when you are near or on railroad property. Explain the dangers of trespassing on railroad property.
  - (e) Tell what an automobile driver can do to safely operate a car at grade crossings, and list three things an automobile driver should never do at a grade crossing.
  - (f) Tell how to report a malfunction of grade crossing warning devices.
  - (g) List safety precautions a pedestrian should follow at a public crossing.
6. Explain the appearance and meaning of the following warning signs and devices: advance warning sign, pavement markings, crossbucks, flashing red lights, crossing gates.
7. Do EACH of the following:
  - (a) Explain how railroad signals operate and show two basic signal types using color or configuration.
  - (b) Explain the meaning of three horn signals.
  - (c) Describe a way to signal a train for an emergency stop.
  - (d) Explain the use and function of the EOTD (end-of-train device), or FRED (flashing rear end device), used on the last car of most freight trains.
8. Select ONE of the following special-interest areas and complete the requirements.
  - (a) **Model Railroading**  
With your parent's and counselor's approval, do TWO of the following:
    - (1) Draw a layout of your own model railroad or one that could be built in your home.

Design a point-to-point track or loop with different routings. Include one of the following: turnaround or terminal or yard or siding.

(2) Build one model railroad car kit or one locomotive kit.

(3) Name the scale of four popular model railroad gauges. Identify the scale of four model cars or locomotives.

(4) Locate the website of four model railroad–related manufacturers or magazine publishers. Print information on their products and services and discuss the information with your counselor.

(5) Build one railroad structure (from scratch or using a kit), paint and weather the structure, mount it on your layout or diorama, and make the surrounding area on the diorama scenic.

(6) Alone or with others, build a model railroad or modular layout including ballast and scenery. Make electrical connections and operate a train. Describe what you enjoyed most.

(7) Participate in a switching contest on a timesaver layout and record your time.

(8) Explain the difference between powering and controlling a model railroad by using direct current, and powering and controlling a model railroad using digital command control.

**(b) Railfanning**

With your parent's and counselor's approval, do TWO of the following:

(1) Visit a railroad museum, historical display, or a prototype railroad-sponsored public event. With permission, photograph, videotape, or sketch items of interest. Explain what you saw and describe your photos, sketches, or videotape.

(2) Purchase tickets and ride a scenic or historic railroad. Under supervision, photograph the equipment and discuss with your counselor the historic significance of the operation.

(3) Locate the website of four rail historical groups, then find information on the history of the rail preservation operations and purpose of each group. Talk with a member of one of the groups and find out how you might help.

(4) Plan a trip by rail between two points. Obtain a schedule and explain when the train should arrive at two intermediate points. Purchase the tickets and make the trip. Explain to your counselor what you saw.



# Railroading 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).

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

Scout's Name: \_\_\_\_\_ Unit: T-255

Counselor's Name: Keith Pierce \_\_\_\_\_ Counselor's Phone No.: 301-951-5290

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

Please submit errors, omissions, comments or suggestions about this **workbook** to: [Workbooks@USScouts.Org](mailto:Workbooks@USScouts.Org)

Comments or suggestions for changes to the **requirements** for the **merit badge** should be sent to:

[Merit.Badge@Scouting.Org](mailto:Merit.Badge@Scouting.Org)

1. Do THREE of the following:

a. Name three types of modern freight trains.

- 1.
- 2.
- 3.

1.	
2.	
3.	

Explain why unit trains are more efficient than mixed freight trains.


b. Name one class I or regional railroad.

Explain what major cities it serves, the locations of major terminals, service facilities and crew change points, and the major commodities it carries.

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c. Using models or pictures, identify 10 types of railroad freight or passenger cars. Explain the purpose of each type of car.

1.		
2.		
3.		
4.		
5.		
6.		
7.		




2. Do the following:

a. Explain the purpose and formation of Amtrak.

Purpose:	
Formation:	

Explain, by the use of a timetable, a plan for making a trip by rail between two cities at least 500 miles apart. List the times of departure and arrival at your destination, the train number and name, and the type of service you want.







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d. With your parent's and counselor's approval, interview someone employed in the rail industry. Learn what that person does and how this person became interested in railroading.


Find out what type of schooling and training are required for this position.


4. Explain the purpose of Operation Lifesaver and its mission.


5. Do THREE of the following:

a. List five safety precautions that help make trains safer for workers and passengers.

1.	
2.	
3.	
4.	
5.	

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b. Explain to your merit badge counselor why safety around rights-of-way is important.



c. List 10 safety tips to remember when you are near a railroad track (either on the ground or on a station platform) or aboard a train.

1.	
2.	
3.	
4.	
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6.	
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10.	

χ  d. Tell your counselor about the guidelines for conduct that should be followed when you are near or on railroad property.


Explain the dangers of trespassing on railroad property.


e. Tell what an automobile driver can do to safely operate a car at grade crossings, and list three things an automobile driver should never do at a grade crossing.

Safely operate a car:

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What a driver should never do at a grade crossing.

1.	
2.	
3.	

χ f. Tell how to report a malfunction of grade crossing warning devices.


χ g. List safety precautions a pedestrian should follow at a public crossing.


6. Explain the appearance and meaning of the following warning signs and devices: advance warning sign, pavement markings, crossbucks, flashing red lights, crossing gates.

Appearance

Meaning

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Advance warning sign:		
Pavement markings:		
Crossbucks:		
Flashing red lights:		
Crossing gates:		

7. Do EACH of the following:

a. Explain how railroad signals operate and show two basic signal types using color or configuration.


b. Explain the meaning of three horn signals.

1.		

2.		
3.		

c. Describe a way to signal a train for an emergency stop.


d. Explain the use and function of the EOTD (end-of-train device) or FRED (flashing rear end device) used on the last car of most freight trains.


8. Select ONE of the following special-interest areas and complete the requirements.

b. Railfanning - With your parent's and counselor's approval, do TWO of the following:

