



RAILROADING

Merit Badge Requirements

1) Do TWO of the following:

- A) Know the name and track gauge for four model railroad gauges. Show the correct way to clean and lubricate model trail equipment.
- B) Draw to scale the layout of your own model railroad or one that could be built in your home. Have a point-to-point or loop with different routings. Include a turnaround, a terminal, or a yard and a siding.
- C) Alone or with others, build a model railroad layout to include ballast and scenery. Make connections from the power supply to the track and accessories, if any.
- D) Build a scale model of a locomotive (with or without power) or make two cars. (Kits with extra detail may be used.)
- E) Draw scale plans and build two accessories.

2) Do the following:

- A) Explain how real electric and diesel locomotives develop power.
- B) Identify by model or picture six different kinds of railroad cars.
- C) Show two basic signals used either by color or configuration. Explain the meaning of five whistle signals. Describe and emergency way to signal a train to stop.

3) Do ONE of the following:

- A) Name four departments of a railroad company. Describe what each does.
- B) Name and explain ten jobs in railroading. Tell which job interests you most. Tell why.

4) Explain six rules of safety to use aboard trains; on platforms; at crossings; and around bridges, yards, and tunnels. Explain the use and function of the "EOTD" or "FRED" now used in place of cabooses.

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

6) Do ONE of the following:

- A) Visit a railroad museum or an operating model railroad and explain what you saw.
- B) View a video showing the operation of a railroad, such as *This Is My Railroad* or *Association of American Railroads* by Pentrax.
- C) Plan and take a rail trip of at least 25 miles. Buy your own ticket. Read the timetables and footnotes correctly.

7) Name three types of modern freight trains and explain why they are more efficient than mixed freights.

Requirement 1

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

If you have selected *Option A*:

There are six common track gauges for model railroads. Give the name and track gauge for at least four of them:

Name: _____ Gauge: _____

Name: _____ Gauge: _____

Name: _____ Gauge: _____

Name: _____ Gauge: _____

Give a brief description of the correct way to clean and lubricate model train equipment: _____

Demonstrate the correct way to clean and lubricate model train equipment to your counselor.

If you selected *Option B*:

Draw to scale the layout of your own model railroad or one that could be built in your home. Use the bottom of this page for pre-plan sketches or drawings. Make sure your plan includes the following:

A point-to-point loop with different routings.

A turnaround A terminal OR A yard and siding

If you selected **Option C**:

Alone or with others, build a model railroad layout to include ballast and scenery. Make the connections from the power supply to the track and accessories, if any.

Make a small sketch of your model railroad that you built:



If you selected **Option D**:

Build a scale model of a locomotive(with or without power) or make two cars.

Give a brief description of your model(s): _____

__ Show your model(s) or photos of your model(s) to your counselor.

If you selected **Option E**:

__ Using a separate piece of paper, draw scale plans for two accessories. Show your plans to your counselor.

__ Using the scale plans you drew, build the two accessories. Show the finished accessories, or photos of them, to your counselor.

Requirement 2

Explain how a real electric locomotive develops power: _____

Explain how a real diesel locomotive develops power: _____

Identify by model or picture six different kinds of railroad cars. List the six cars you identified:

Place an "M" by the cars you identified by a model and place a "P" by the cars you identified by picture.

In the spaces below show two basic signals used either by color or configuration:

Name Of Signal:

Name Of Signal:

Explain the meaning of the following whistle signals:

0: _____

--000: _____

000: _____

--0-: _____

--: _____

00: _____

Describe an emergency way to signal a train to stop: _____

Requirement 3

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

If you selected *Option A*:

Name four departments of a railroad company and describe what each does:

Department: _____ Description: _____

Department: _____ Description: _____

Department: _____ Description: _____

Department: _____ Description: _____

If you selected *Option B*:

Name and explain ten jobs in railroading:

Job: _____ Duties: _____

Job: _____ Duties: _____

Job: _____ Duties: _____

Job: _____ Duties: _____

Job: _____ Duties: _____

Job: _____ Duties: _____

Job: _____ Duties: _____

Job: _____ Duties: _____

Job: _____ Duties: _____

Job: _____ Duties: _____

Which job interests you most? _____ Why? _____

Requirement 4

Explain six rules of safety to use aboard trains; on platforms; at crossings; and around bridges, yards, and tunnels:

Rule: _____

Rule: _____

Rule: _____

Rule: _____

Rule: _____

Rule: _____

Explain the use and function of the "EOTD" or "FRED" now used in place of cabooses: _____

Requirement 5

Use the space below to explain the use of a timetable by making a written plan for a trip by rail between two cities at least 500 miles apart.

Departure Time: _____ Arrival Time: _____ Train #: _____ Service: _____

Written Plan: _____

Requirement 7

Name three types of modern freight trains and explain why each is more efficient than mixed freights.

Train: _____

Why is this train more efficient than mixed freights? _____

Train: _____

Why is this train more efficient than mixed freights? _____

Train: _____

Why is this train more efficient than mixed freights? _____
