

# RAILROADING

## MERIT BADGE REQUIREMENTS

### Requirement 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.

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- b. Name one class 1 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. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

- d. Explain how a modern diesel or electric locomotive develops power. Explain the terms dynamic braking and radial steering trucks.

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**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.**

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

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

**Requirement 6**

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

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**Requirement 7 Do each of the following:**

**a. Explain how railroad signals operate.**

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**Show two basic signal types using color or configuration:**

**1. Name of Signal:**

**2. Name of Signal:**

**b. Explain the meaning of three horn signals.**

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**Requirement 7 Continued**

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

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**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 trains.**

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**Requirement 8b Railfanning Do 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.**