



\_\_\_\_\_

\_\_\_\_\_

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.

Depart Location	Time	Arrival Location	Time	Train#	Service
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

b. List and explain the various forms of public/mass transit using rail as the fixed-guide path. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**3. Do ONE of the following:**

a. Name four departments of a railroad company. Describe what each department does.

Department	Describe what each department does.
_____	_____
_____	_____
_____	_____
_____	_____

-OR-  b. Tell about the opportunities in railroading that interest you most and why.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

-OR-  c. Name four rail support industries. Describe the function of each one.

Rail Support Industry

Describe the function of each one.

_____	_____
_____	_____
_____	_____
_____	_____

-OR-  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 railroad rights-of-way are important for safety. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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.

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\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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

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Explain the dangers of trespassing on railroad property. \_\_\_\_\_

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e. Tell what an automobile driver can do to safely operate a car at grade crossings, \_\_\_\_\_

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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. \_\_\_\_\_

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**6. Explain the appearance and meaning of the following warning signs and devices:**

advance warning sign, \_\_\_\_\_

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pavement markings, \_\_\_\_\_

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crossbucks, \_\_\_\_\_

---

flashing red lights, \_\_\_\_\_

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crossing gates. \_\_\_\_\_

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**7. Do EACH of the following:**

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

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b. Explain the meaning of three whistle signals.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

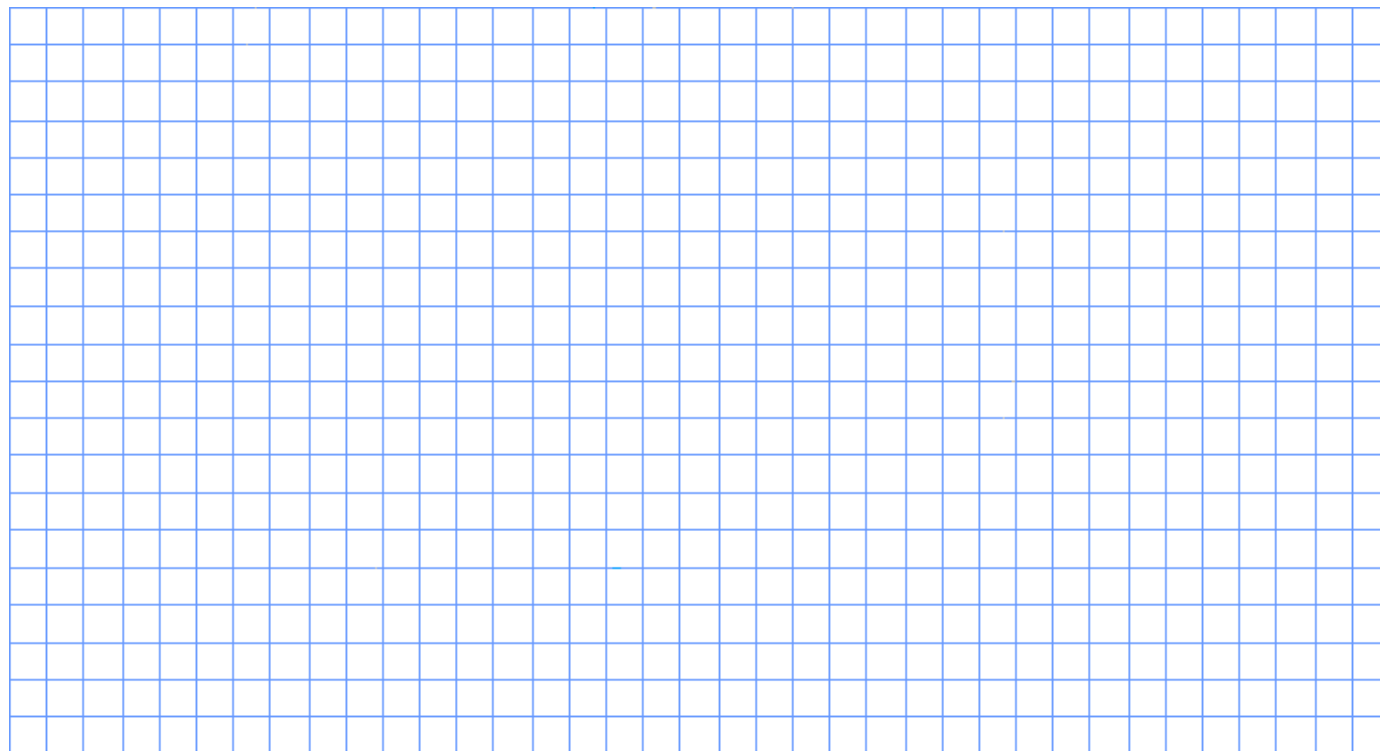
d. Explain the use and function of the EOTD (end-of-train device) or FRED (flashing rear end device) used on the last car of most trains. \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**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. *Show the correct way to clean and oil model train equipment.*

Gauge	Name	Scale	Track Gauge	Gauge	Name	Scale	Track Gauge
1 _____	_____	_____	_____	3 _____	_____	_____	_____
2 _____	_____	_____	_____	4 _____	_____	_____	_____

4. Locate the Web site 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.

