

READING COMPANY TECHNICAL & HISTORICAL SOCIETY

Railroading Merit Badge Class - Workbook

Thank you for your interest in the Railroading Merit Badge Instruction provided by the Reading Railroad Heritage Museum! This workbook has been created to help you successfully complete the requirements for earning the badge. REMINDER: Sections 1a, 3a and 5a, c, e are to be completed BEFORE attending your scheduled class! If you have any questions or concerns prior to the class, please contact Class Instructor David Adams at dadams5513@gmail.com

Requirement 1a: Name Three Types of Modern Freight Trains.

Train 1: _____

Train 2: _____

Train 3: _____

Why are “Unit Trains” more efficient than “Mixed” Freight Trains?

Requirement 3a: Name four departments of a railroad company. Describe what each department does.

1.Department _____ Description _____

2.Department _____ Description _____

3.Department _____ Description _____

4.Department _____ Description _____

Requirement 5a: List five safety precautions that help make trains safer for workers and passengers.

1. _____
2. _____
3. _____
4. _____
5. _____

Requirement 5c: 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. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

Requirement 5e: 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.

Requirement 2b: List and explain the various forms of public/mass transit using rail.

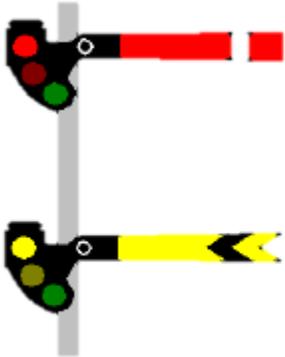
Requirement 1d: Explain how a modern diesel or electric locomotive develops power.

Explain the term “Dynamic Braking.”

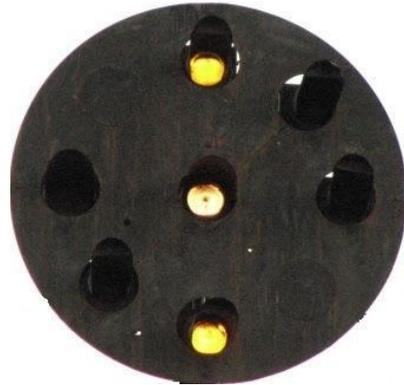
Explain the term “Radial Steering Trucks.”

Requirement 7a: Explain how railroad signals operate.

Semaphore Signal



Position Light Signal



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

CROSSING GATE



ADVANCE WARNING SIGN



PAVEMENT MARKINGS



CROSSBUCKS



FLASHING RED LIGHTS



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

Purpose: _____

Mission: _____

TIMETABLE CLASS

Requirement 2a: 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.

Departure Location: _____ Departure Time: _____

Arrival Location: _____ Arrival Time: _____

Train #: _____ Train Name: _____

Distance Traveled: _____

Services: _____

Requirement 1c: Using models or pictures, identify 10 types of railroad freight or passenger cars. Explain the purpose of each type of car.



TYPE of CAR: _____

PURPOSE: _____



TYPE of CAR: _____

PURPOSE: _____



TYPE of CAR: _____

PURPOSE: _____



TYPE of CAR: _____

PURPOSE: _____



TYPE of CAR: _____

PURPOSE: _____



TYPE of CAR: _____

PURPOSE: _____



TYPE of CAR: _____

PURPOSE: _____



TYPE of CAR: _____

PURPOSE: _____



TYPE of CAR: _____

PURPOSE: _____



TYPE of CAR: _____

PURPOSE: _____

Requirement 7c: Describe a way to signal a train for an emergency stop.

Requirement 7d: 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.

Requirement 7b: Explain the meaning of three whistle signals (~ is a long blast, 0 is a short blast)

0 _____

~ 0 0 0 _____

0 0 _____

~ ~ 0 ~ _____

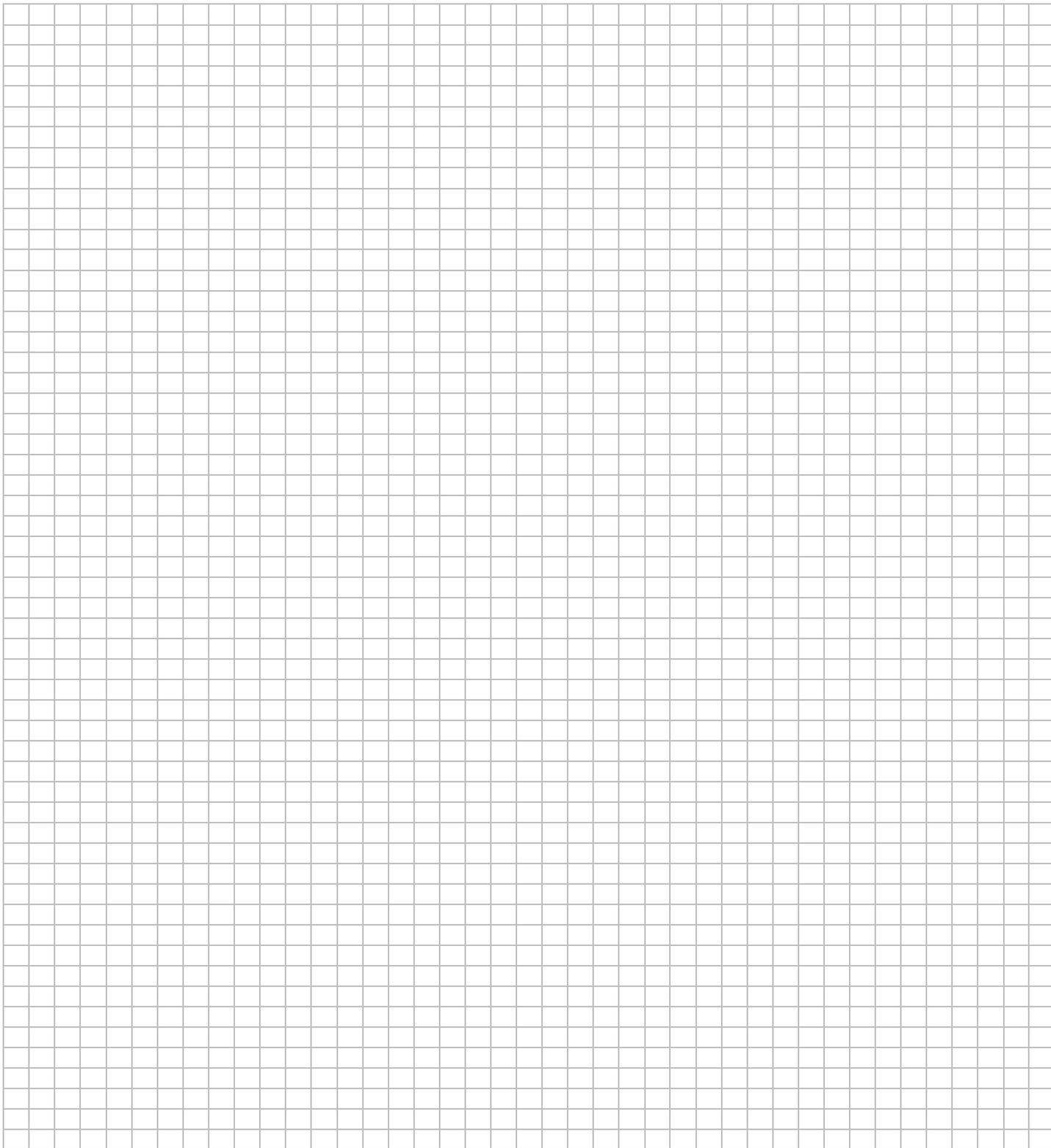
~ ~ _____

~ ~ ~ ~ ~ ~ ~ ~ _____

Requirement 8a(3): Name the scale of four popular model railroad gauges. Identify the scale of four model cars or locomotives.

- 1
- 2
- 3
- 4
- 5
- 6

Requirement 8a(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.



NAME OF SCOUT:

DATE: