Ages 9–12 75–90 minutes · 1–4 players, or a class in teams

THE GHOST TRAIN OF MARROWBY

Every Halloween since 1958, a ghost train has passed the old station at midnight. Follow the last stationmaster's clues and find out what it really is.

The players are the railway museum's newest junior volunteers. They decode a telegram with a Morse code tree, turn a punched ticket over a letter board, work out who stood where on Pell Street, rebuild the ghost train's timetable and shade a picture grid. Each puzzle earns a letter, but the letters come out scrambled: a last riddle, readable only with all five letters on a signal disk the players build, tells them what word to make. That word explains the ghost train. Spooky, no gore, and the mystery has a real explanation.

Skills: Morse code · codes and ciphers · spatial reasoning · deductive logic · time, distance and speed · picture logic · following multi-step directions · teamwork

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What you need

- Pencils with erasers, scissors and tape
- Optional: one paper fastener (brad) for the signal disk. No fastener? A fingertip holds the disks together. Card stock for page 8 makes sturdier disks.
- Optional: a timer, and a battery tea light for atmosphere. No real candles.

Before you play (10 minutes)

1. Print at 100% scale ("actual size"), Letter or A4, single-sided. Black and white is fine.
2. Keep pages 11 and 12 (hints and answers) away from the players. Fold page 12 in half, words inside, and tape it shut.
3. Cut the six hint strips apart (page 11) and fold each like a fan, so only the puzzle's name shows.
4. On page 9, fold the bottom back along the dashed line and tape it shut, so the ending is hidden behind the page.
5. For younger hands, cut the ticket's nine windows (page 4) yourself.

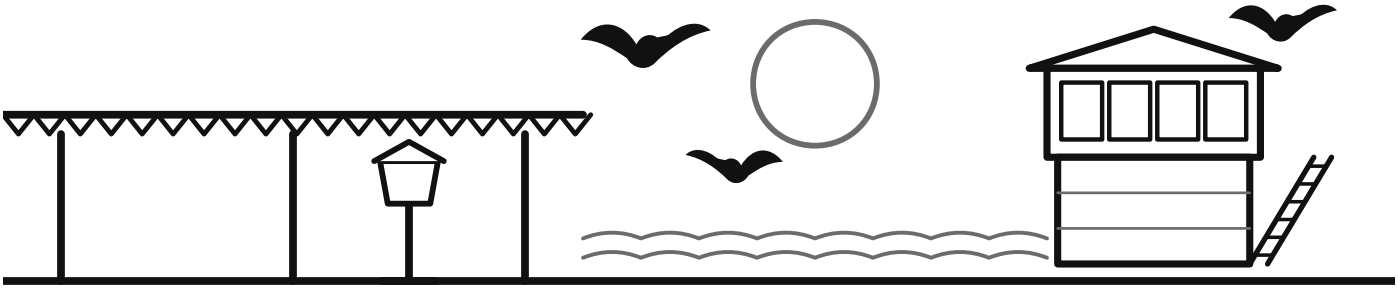
How to play

1. Players read Hattie's letter (page 2) out loud, then solve Puzzles 1 to 5 in any order. A big team can split up. Each puzzle gives one clue letter for the tracker on page 2.
2. Stuck? Hand over that puzzle's hint strip. Players unfold one hint at a time. Grown-ups don't need to help beyond the strips.
3. For a challenge, set a 90-minute timer. If time runs out, keep going. The ghost train waits.

If a player can't easily see the pictures or uses a screen reader, print pages 13 and 14 too, or read them aloud.

In a classroom

Teams of 3–4, each with its own copy of pages 2–11 (page 12 is just for you). Plan two periods: Puzzles 1–3, then the rest. Cut out the ticket, its windows and the disks before class.



THE GHOST TRAIN OF MARROWBY

To our new junior volunteers,

Welcome to the Marrowby Railway Museum. You've probably heard the story already. Marrowby Junction closed on Halloween night in 1958. At midnight, after the last real train had gone, people on Pell Street saw one more train pass in the fog: gold lamps, no smoke, not a sound. The town calls it the ghost train, and some people say it still comes every Halloween.

My grandfather, Elias Quill, was the last stationmaster here. He knew what the ghost train really was, and he never told. He left clues instead. I've set them out for you: from the telegraph office, the ticket window, his notes about Pell Street, the timetable board and the signal box.

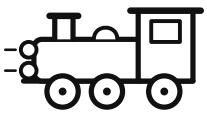
Each clue gives you one letter, but they won't come in order. Grandpa's last riddle will tell you what word to make, and only someone with all five letters can read it.

Midnight is coming.

Hattie Quill, Head Volunteer

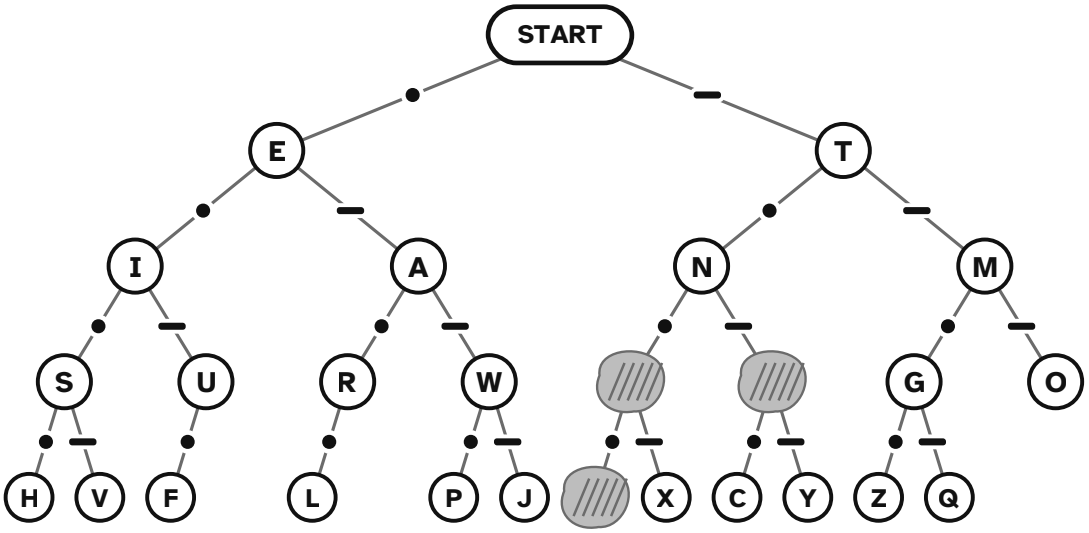
CLUE TRACKER

Puzzle 1	Puzzle 2	Puzzle 3	Puzzle 4	Puzzle 5
☐	☐	☐	☐	☐

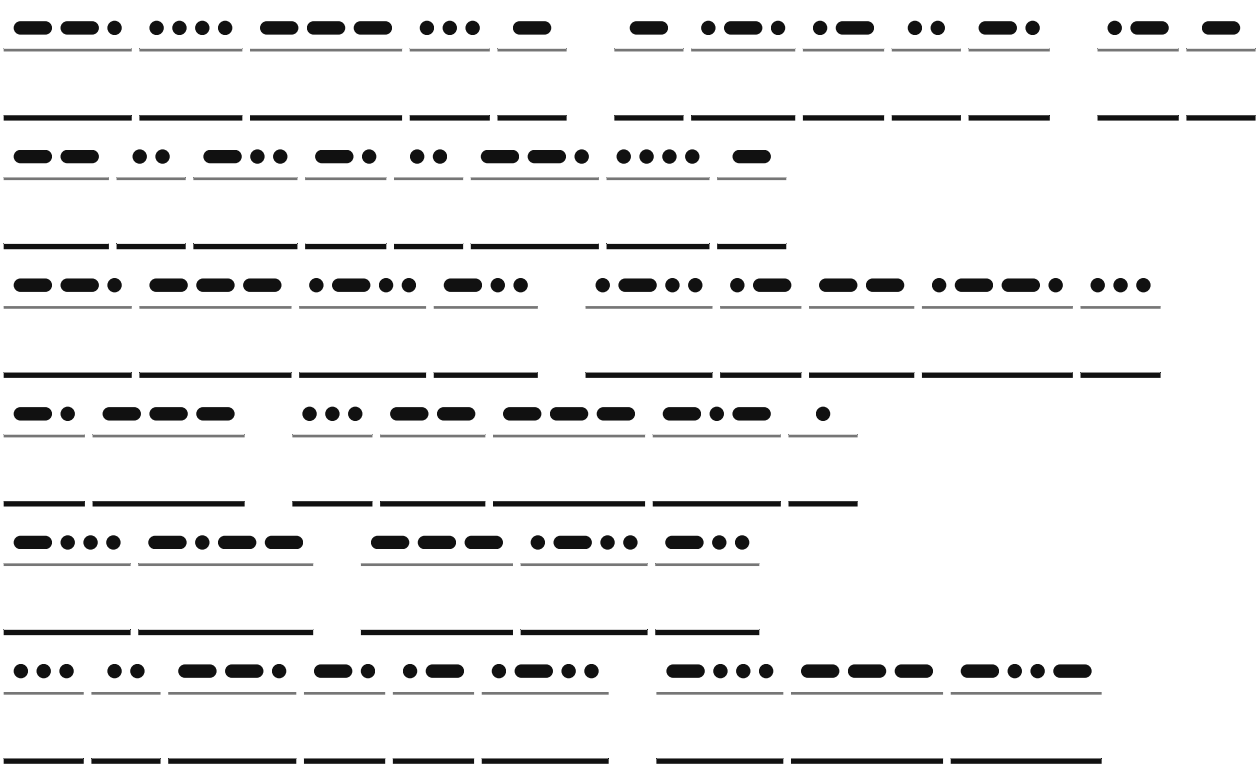


THE LAST TELEGRAM

> *At five past midnight that Halloween, the night porter tapped a telegram to the next station down the line. Grandpa kept the paper tape, and the porter's old code chart. Three letters on the chart are smudged away.*



The telegram. Decode it.



The porter wasn't scared. He was puzzled. No train was due that night.

Clue letter: the smudged letter used most ☐

PUZZLE 2 · THE TICKET WINDOW

THE TICKET NOBODY BOUGHT

In the ticket drawer is one ticket that nobody ever bought, with nine square windows punched in it. It belongs with the letter board that hung above the ticket window.

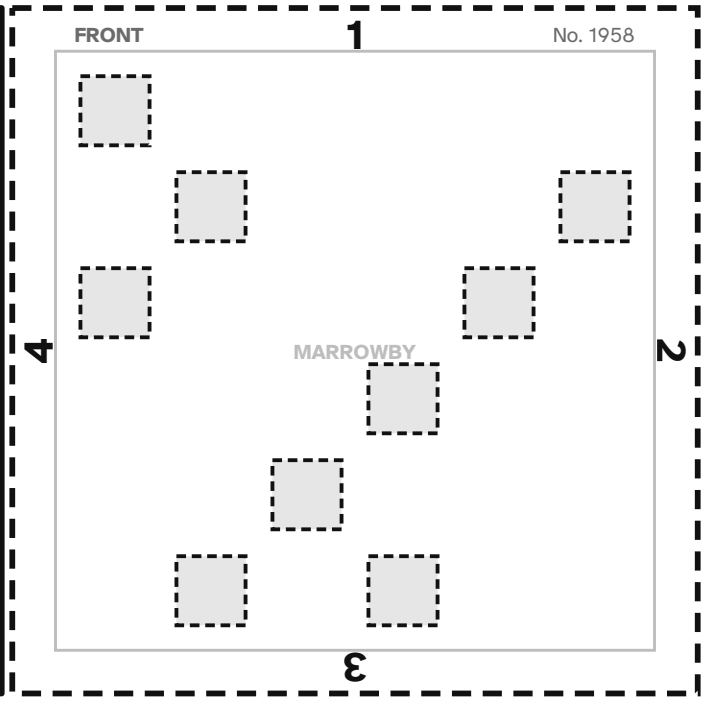
1 Cut out the ticket on its dashed line.

2 Cut out its nine gray windows. Fold the ticket gently across a window, snip into the fold, then cut around the square. A grown-up can help.

3 Lay the ticket on the letter board, FRONT up, with its edges on the board's edges. What does it say?

A	O	T	L	R	E
T	D	T	A	T	M
I	E	I	H	T	E
R	N	I	O	G	C
L	H	N	S	U	O
S	E	T	T	E	E

THE LETTER BOARD



THE TICKET (CUT IT OUT)

The ticket's message:

1 _____ 2 _____

3 _____ 4 _____

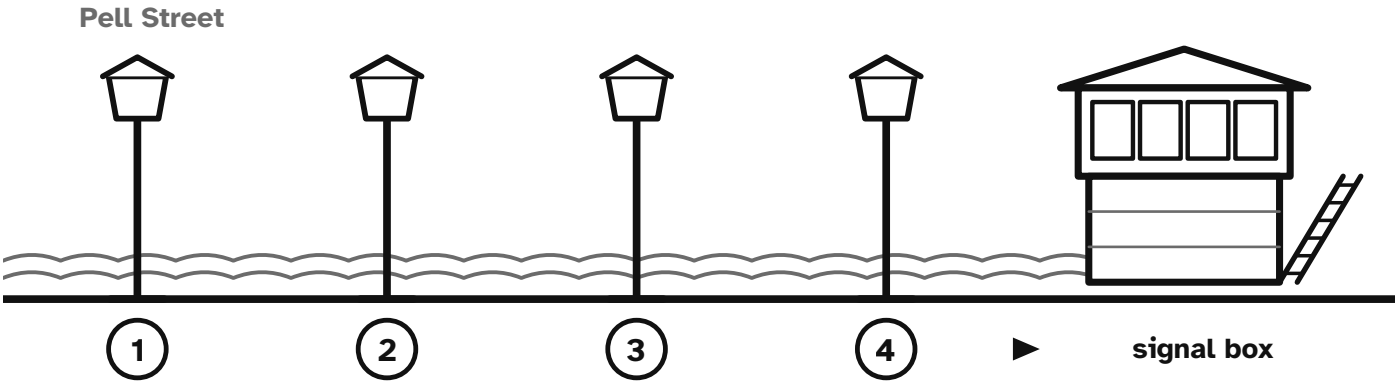
Grandpa never sold that ticket. He kept it for someone special.

Clue letter ☐

PUZZLE 3 · GRANDPA'S NOTES

THE PELL STREET WITNESSES

The morning after, Grandpa asked four neighbors what they saw. Each had stood under a different street lamp on Pell Street, and each remembered one thing best. His notes got rained on. Only six lines are left.



1. Delphine stood under one of the two end lamps.
2. Oskar didn't stand right next to Lupe.
3. The person who saw a light in the signal box stood farther from it than Haruki.
4. Lupe saw nothing but fog.
5. The gold lamps and the waving hand were both seen from lamp 3 or lamp 4.
6. Oskar didn't see the gold lamps.

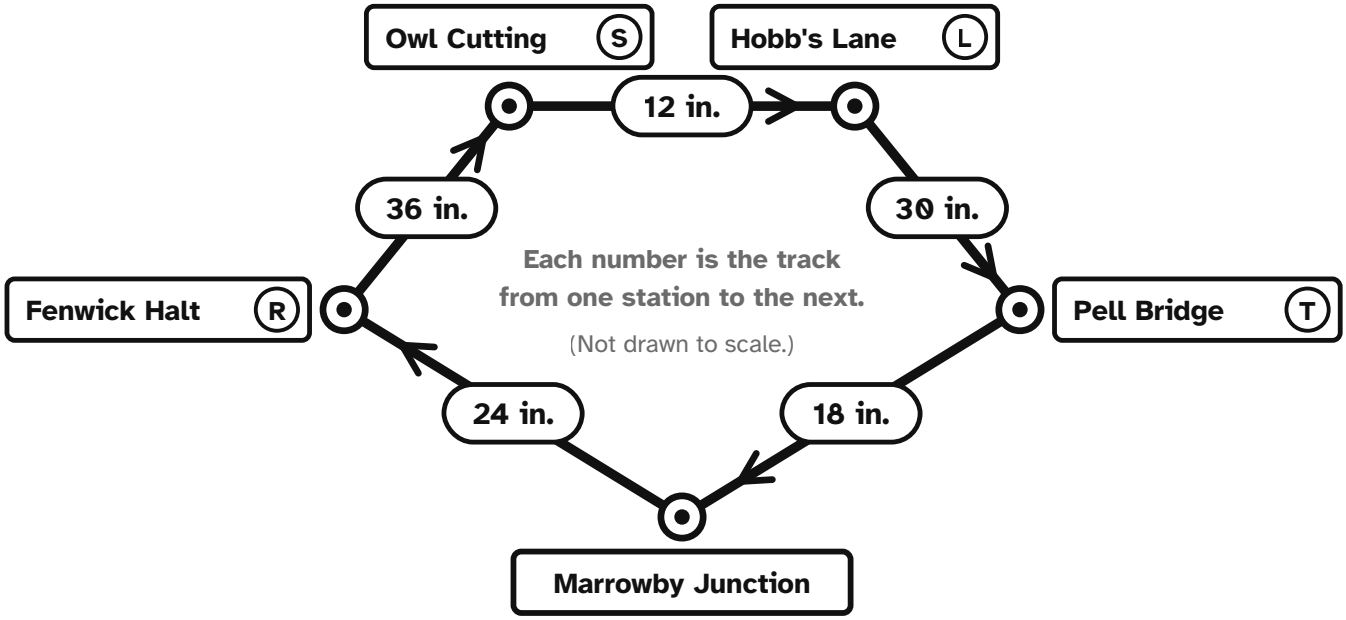
	STREET LAMP				REMEMBERED			
	Lamp 1	Lamp 2	Lamp 3	Lamp 4	Gold lamps	Waving hand	Signal box light	Only fog
Delphine								
Haruki								
Lupe								
Oskar								

Who stood under lamp 4, right beside the signal box? _____

Clue letter: the first letter of their name ☐

THE MIDNIGHT TIMETABLE

> *Pinned inside the signal box door is a timetable in Grandpa's handwriting, for a train that isn't in any railway book. Most of the times have faded.*



STATION	ARRIVES	LEAVES
Marrowby Junction	—	**11:36**
Fenwick Halt	**11:40**	
Owl Cutting		
Hobb's Lane		
Pell Bridge		
Marrowby Junction	**12:00**	—

Grandpa's notes

The ghost train runs at the same speed all the way round.

It waits exactly one minute at every station on the way.

It's back at Marrowby Junction at midnight, every time.

Which station does the ghost train reach at exactly 11:50? _____

Grandpa had underlined every time twice.

Clue letter: the letter on that station's sign ☐

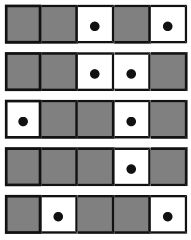
LIGHTS IN THE SIGNAL BOX

Up in the signal box, Grandpa drew a grid of little squares in his notebook, with numbers all around it. Under it he wrote: "The last signal I ever set."

Shade the lit squares to find the picture.

- Numbers above a column read from top to bottom. Numbers beside a row read from left to right.
- Each number is a run of lit squares side by side. The runs come in the same order as the numbers.
- Between two runs there is at least one dark square, maybe more.
- 0 means the whole line is dark. 12 means the whole row is lit.
- When you know a square is dark, put a dot in it.

Example: a row of 5 squares with the clue **2 1**. There are only three ways to fit it:



Square 2 is lit in all three, so it must be lit.

Start here: the 0 row and the 12 row are done for you. Next, work up each column from the bottom.

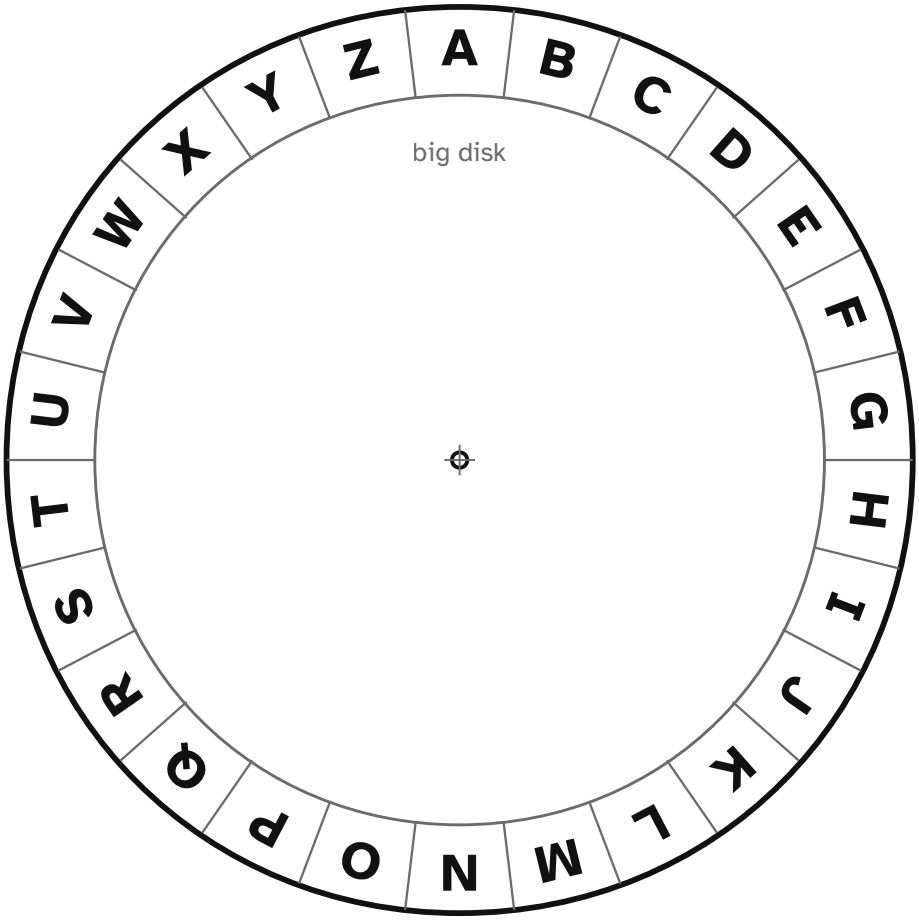
	2	1 1	7 2	7 1	1 1 2	1 1	1 1	1 1 2	7 1	7 2	1 1	2
2 2												
3 3												
2 2 2												
2 2												
2 2												
2 2												
4 4												
0	•	•	•	•	•	•	•	•	•	•	•	•
1 1 1 1 1 1												
12												

The levers in the signal box still move. One of them isn't joined to any track.

Clue letter: the letter in the picture

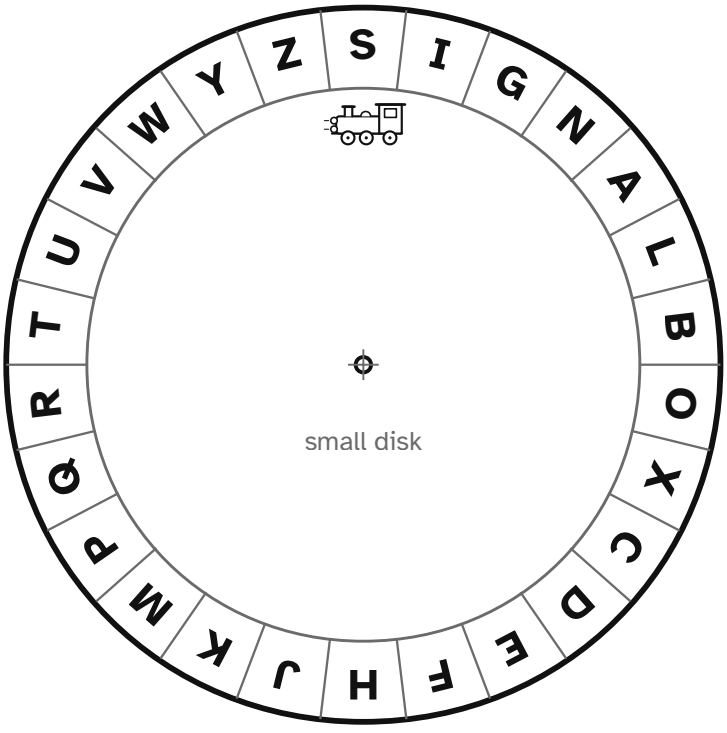
BEFORE THE LAST STEP

MAKE THE SIGNAL DISK



In the signal box drawer: two paper disks and a note, "For my last riddle."

1. Cut out both disks on the outer circle.
2. Poke each center dot with a sharp pencil.
3. Lay the small disk on the big one. Push a paper fastener through both centers.
4. To use it, turn the small disk until its S, with the little engine, sits right under a letter on the big disk.



No fastener? Stack the disks and hold the centers together with a fingertip.

The small disk's letters aren't in A to Z order. That's on purpose.

THE GHOST TRAIN'S SECRET

> *Grandpa's last riddle is in code, and every letter has its own setting.*

Each code letter has a puzzle number under it. Turn the small disk until its S, with the little engine, sits right under that puzzle's clue letter on the **big** disk. Find the code letter on the big disk and write the letter just inside it, on the **small** disk.

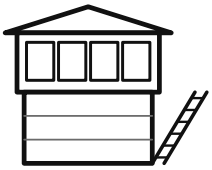
X	Y	P		F	Z	H	Q		Y	Z	P	G	N
1	4	2		5	3	1	4		2	5	3	1	4
___	___	___		___	___	___	___		___	___	___	___	___

L	P	T	B		L	U	Q	T	I	W	X
2	5	3	1		4	2	5	3	1	4	2
___	___	___	___		___	___	___	___	___	___	___

What am I? Unscramble your five clue letters to answer the riddle. That's what the ghost train really is.

The ending is folded behind this line. Unfold it only when you've solved the riddle.

You've solved it! Up in the signal box, under an old dust sheet, is a tiny Marrowby: the station, Pell Street, the bridge and a loop of track small enough to fit on a table. On the track sits a little gray engine with two gold lamps.



On Halloween night in 1958, after the last real train had gone, Grandpa Elias ran his model train at midnight to say goodbye to the station. From Pell Street, through the fog and the signal box's big windows, its tiny lamps looked like a real train far away. No smoke, no sound, and a hand waving from the window: that was Grandpa. It's why his timetable measured the track in inches.

Tucked under the engine is a note: "*I've run the ghost train every Halloween since Grandpa did. This year, it's your turn to drive. Your driver's tickets are on the next page. Hattie*"

GHOST TRAIN DRIVERS

One ticket for each driver. Cut on the dashed lines.

GHOST TRAIN DRIVER

MARROWBY RAILWAY MUSEUM

Driver: _____

Halloween, year: _____

Leaves 11:36 · Home at midnight

Signed: Hattie Quill



GHOST TRAIN DRIVER

MARROWBY RAILWAY MUSEUM

Driver: _____

Halloween, year: _____

Leaves 11:36 · Home at midnight

Signed: Hattie Quill



GHOST TRAIN DRIVER

MARROWBY RAILWAY MUSEUM

Driver: _____

Halloween, year: _____

Leaves 11:36 · Home at midnight

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Driver: _____

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Leaves 11:36 · Home at midnight

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MARROWBY RAILWAY MUSEUM

Driver: _____

Halloween, year: _____

Leaves 11:36 · Home at midnight

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GHOST TRAIN DRIVER

MARROWBY RAILWAY MUSEUM

Driver: _____

Halloween, year: _____

Leaves 11:36 · Home at midnight

Signed: Hattie Quill

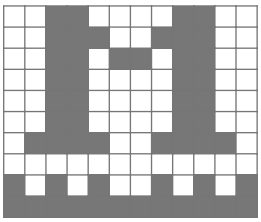


HINT STRIPS

Cut the strips apart on the dashed lines. Fold each one like a fan along the dotted lines, so only the puzzle's name shows. Players unfold one hint at a time, and only when they're stuck.

Puzzle 1 **The Last Telegram**	**HINT 1** Each group of marks on the tape is one letter. Start at START on the chart and follow the branches down, one mark at a time.	**HINT 2** A dot takes the branch marked with a dot; a dash takes the branch marked with a dash. The first group is dash, dash, dot: T, then M, then G.	**HINT 3** Leave a gap where a group lands on a smudge. The words around it, like SMO_E, _Y and MI_NIGHT, tell you each smudged letter. Then count.
Puzzle 2 **The Ticket**	**HINT 1** Lay the ticket on the board with side 1 at the top. Read the letters in the windows from left to right, top row first.	**HINT 2** Nine letters isn't the whole message. Look at the numbers on the ticket's edges.	**HINT 3** Turn the ticket so side 2 is at the top and read nine more letters. Then side 3, then side 4. Put all 36 together and split them into words.
Puzzle 3 **The Witnesses**	**HINT 1** Clue 5 tells you where two of the four things were seen. What does that leave for lamps 1 and 2?	**HINT 2** The signal box light and the fog were seen from lamps 1 and 2. Lupe saw the fog, so she's at lamp 1 or 2. Try Delphine at lamp 4: who could have seen the light?	**HINT 3** Clue 3 rules out Haruki and clue 2 rules out Oskar, so Delphine is at lamp 1 and saw the light. Lupe is at lamp 2. Oskar can't be right next to Lupe.
Puzzle 4 **The Timetable**	**HINT 1** Find the track from Marrowby Junction to Fenwick Halt on the map. How far does the train go between 11:36 and 11:40?	**HINT 2** 24 inches in 4 minutes is 6 inches a minute. The train waits a minute at Fenwick Halt (leaves 11:41), then takes 36 ÷ 6 = 6 minutes to reach Owl Cutting.	**HINT 3** Owl Cutting: arrives 11:47, leaves 11:48. If your times don't reach Marrowby at exactly 12:00, a one-minute wait is missing somewhere.
Puzzle 5 **The Signal Box**	**HINT 1** Each column's last number ends in row 10. Column 1 (2) is rows 9 and 10. In column 2 (1 1), row 10 is the last 1, so row 9 is dark. Do every column.	**HINT 2** Row 8 is dark, so each 7 fills rows 1 to 7 of its column. Then row 1 (2 2) has both its runs: dot the rest. Rows 4, 5 and 6 too.	**HINT 3** Rows 1 to 7 are a big capital letter, two squares thick, with legs in columns 3–4 and 9–10. Its middle dips to row 3. Row 9 is six signal levers.
The last step **The Riddle**	**HINT 1** Do all the letters marked 1 first, then move the disk and do all the 2s, and so on.	**HINT 2** The first code letter, X, is marked 1. Put the small disk's S under your Puzzle 1 letter. Find X on the big disk and read the letter inside it.	**HINT 3** If letters with one number come out wrong every time, that puzzle's clue letter is probably wrong. Go back and check it.

Answers. Fold this page in half, words inside, and tape it shut before you play.

Puzzle 1	GHOST TRAIN AT MIDNIGHT / GOLD LAMPS / NO SMOKE / BY OLD SIGNAL BOX. Smudged: B, D and K. D is used most (MIDNIGHT, GOLD, OLD: three times; B twice, K once), so the clue letter is **D**.
Puzzle 2	Side 1: ADMITONET. Side 2: OTHEGHOST. Side 3: TRAINCLUE. Side 4: LETTERISE. ADMIT ONE TO THE GHOST TRAIN. CLUE LETTER IS **E**.
Puzzle 3	Lamp 1: Delphine, the signal box light. Lamp 2: Lupe, only fog. Lamp 3: Haruki, the gold lamps. Lamp 4: **Oskar**, the waving hand. Clue letter **O**.
Puzzle 4	6 inches a minute. Fenwick Halt 11:40–11:41, Owl Cutting 11:47–11:48, **Hobb's Lane 11:50**–11:51, Pell Bridge 11:56–11:57, Marrowby Junction 12:00. Clue letter **L**. (Forgetting the waits gets the train home at 11:56.)
Puzzle 5	A capital **M** above a row of six signal levers. Clue letter **M**. 
The riddle	Letters in puzzle order: D, E, O, L, M. The riddle reads THE REAL THING, ONLY SMALLER. Each letter's number says which puzzle's letter sets the disk (1 = D, 2 = E, 3 = O, 4 = L, 5 = M).
The secret	**MODEL**. The ghost train is Elias Quill's model railway in the signal box. Seen through the fog and the big windows, its lit engine looked like a real train far away.

Grown-ups get a kit too

Another kit for this age, *The Lantern Society*, and our escape-room kit for teens and adults, *The Clockmaker's Study*, are on the same page you got this one from. Kinundrum makes personalized puzzle countdowns for families and group chats.

Credits

Story: our own. Marrowby Junction, its railway museum, the Quills and the Pell Street neighbors are made up.

Illustrations: original art made for this kit. Fonts: Atkinson Hyperlegible (Braille Institute of America), SIL Open Font License 1.1; Creepster (Sideshow), SIL Open Font License 1.1; Noto Sans Symbols 2 (The Noto Project Authors), SIL Open Font License 1.1.

ANOTHER WAY TO PLAY

Text versions of the picture puzzles, for a player who can't easily see them or uses a screen reader. Read them aloud or hand these pages over. The answers and hint strips are the same; write answers on the puzzle's own page. Hattie's letter and Puzzle 3's clues are already text.

Puzzle 1 · The Last Telegram

The porter's code chart, written out. Each letter is listed after its marks. Three letters are smudged: their marks are still on the chart, but the letter can't be read.

- One mark: dot **E**, dash **T**.
- Two marks: dot dot **I**, dot dash **A**, dash dot **N**, dash dash **M**.
- Three marks: dot dot dot **S**, dot dot dash **U**, dot dash dot **R**, dot dash dash **W**, dash dot dot **(smudged)**, dash dot dash **(smudged)**, dash dash dot **G**, dash dash dash **O**.
- Four marks: dot dot dot dot **H**, dot dot dot dash **V**, dot dot dash dot **F**, dot dash dot dot **L**, dot dash dash dot **P**, dot dash dash dash **J**, dash dot dot dot **(smudged)**, dash dot dot dash **X**, dash dot dash dot **C**, dash dot dash dash **Y**, dash dash dot dot **Z**, dash dash dot dash **Q**.

The tape, in four parts. A slash separates letters, and a double bar separates words.

- Part 1: dash dash dot / dot dot dot dot / dash dash dash / dot dot dot / dash || dash / dot dash dot / dot dash / dot dot / dash dot || dot dash / dash || dash dash / dot dot / dash dot dot / dash dot / dot dot / dash dash dot / dot dot dot dot / dash
- Part 2: dash dash dot / dash dash dash / dot dash dot dot / dash dot dot || dot dash dot dot / dot dash / dash dash / dot dash dash dot / dot dot dot
- Part 3: dash dot / dash dash dash || dot dot dot / dash dash / dash dash dash / dash dot dash / dot
- Part 4: dash dot dot dot / dash dot dash dash || dash dash dash / dot dash dot dot / dash dot dot || dot dot dot / dot dot / dash dash dot / dash dot / dot dash / dot dash dot dot || dash dot dot dot / dash dash dash / dash dot dot dash

Puzzle 2 · The Ticket Nobody Bought

The letter board, row by row from the top:

Row 1	**A**	**O**	**T**	**L**	**R**	**E**
Row 2	**T**	**D**	**T**	**A**	**T**	**M**
Row 3	**I**	**E**	**I**	**H**	**T**	**E**
Row 4	**R**	**N**	**I**	**O**	**G**	**C**
Row 5	**L**	**H**	**N**	**S**	**U**	**O**
Row 6	**S**	**E**	**T**	**T**	**E**	**E**

The ticket is the same size as the board, with nine windows. Lying FRONT up, its edges are numbered 1 at the top, 2 on the right, 3 at the bottom and 4 on the left. With side 1 at the top, the windows are over row 1 square 1, row 2 square 2, row 2 square 6, row 3 square 1, row 3 square 5, row 4 square 4, row 5 square 3, row 6 square 2, row 6 square 4, counting squares from the left. Graph paper helps: draw a 6 by 6 square, cut those windows out, and lay it on a copy of the board.

Puzzle 3 · The Pell Street Witnesses

The street picture shows four street lamps, numbered 1 to 4 from left to right, and the signal box just past lamp 4.

Puzzle 4 · The Midnight Timetable

The map is a loop, run clockwise, with a station at every corner. The track from Marrowby Junction to Fenwick Halt is 24 inches, Fenwick Halt to Owl Cutting 36 inches, Owl Cutting to Hobb's Lane 12 inches, Hobb's Lane to Pell Bridge 30 inches, and Pell Bridge back to Marrowby Junction 18 inches. The station signs carry these letters: Fenwick Halt R, Owl Cutting S, Hobb's Lane L, Pell Bridge T. Marrowby Junction's sign has no letter.

Puzzle 5 · Lights in the Signal Box

The grid is 12 squares wide and 10 tall. Graph paper helps.

- Rows, top to bottom: 2 2 / 3 3 / 2 2 2 / 2 2 / 2 2 / 2 2 / 4 4 / 0 / 1 1 1 1 1 1 / 12.
- Columns, left to right: 2 / 1 1 / 7 2 / 7 1 / 1 1 2 / 1 1 / 1 1 / 1 1 2 / 7 1 / 7 2 / 1 1 / 2.
- Done for you: row 8 (the 0 row) is all dark and row 10 (the 12 row) is all lit.

The signal disk · the last step

No disk needed. The big disk is the alphabet A to Z. Going round the small disk from the S with the little engine, its letters are S I G N A L B O X C D E F H J K M P Q R T U V W Y Z. To set the disk to a letter, write the small disk's S under that letter in the top row, then I under the next letter, and so on round to the start, until every square is full. Find each code letter in the top row and read the letter under it. Start a fresh strip for each setting.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Big disk																										
Small disk																										
Small disk																										

The ticket and the disk are cut-out crafts. These versions replace them; the driver's tickets on page 10 need no text version.