

Balloon Railway Switch

HOST ONLY - preparation and story

Includes answers. Keep these pages with an adult.

Six railway switch records disagree with the control desk checks. Recover the route, crew, station, stock and signal evidence. Every check rules out one incorrect switch. Collect five named badge digits and use the final sheet. Every clue is on the table; ask the host for one hint at a time.

1. Print one player pack and two record sheets per team. Keep the host answers and all three hint levels with the adult.
2. Keep every clue as a full sheet at one table. Put the final sheet face down until all five results are recorded. Nothing needs cutting, folding or hiding.
3. Give each child a pencil. Choose a reader, recorder and checker, and swap jobs after each clue. Use one team for 2-4 children or two teams for 5-6.

Players: 4; teams: 1. Print one player and prop set per team. Invitations and certificates: 4 each.

Paper and pencils are enough. Keep whole sheets at one table; nothing needs cutting, folding or hiding.

Balloon Railway Switch

HOST ONLY - solution guide

1. Track: 9

The route ends at row 3, column 3. That cell gives 9.

2. Crew: 5

Juno has Flag; Otis has Map; Zed has Bell. Zed's item gives 5.

3. Station: 8

D2, A1, B2, C3 reads HOME. The conversion table gives 8.

4. Stock: 2

Known stock: $12 + 5 - 1 = 16$. Closing stock 18 minus 16 gives the missing return 2. Cancelled +7 never arrived.

5. Signal: 5

The decoded word is HOME; its row gives 5.

6. Final: 01917

Only Switch B matches all five columns. Copy its printed code 01917.

Balloon Railway Switch

HOST ONLY - timeline and paper check

3 minutes: Read the story, show the badge record and choose roles.

4 minutes: Solve Track. Offer one hint level at a time if wanted.

6 minutes: Solve Crew. Offer one hint level at a time if wanted.

5 minutes: Solve Station. Offer one hint level at a time if wanted.

5 minutes: Solve Stock. Offer one hint level at a time if wanted.

4 minutes: Solve Signal. Offer one hint level at a time if wanted.

5 minutes: Use the five results on the final sheet.

2 minutes: Read the ending and thank each teammate.

Paper completion: check each badge against the solution guide, then check the final code. No device is required.

The matching switch record routes the imaginary train to Home. Thank your team for checking the evidence together. Confirmed: Switch B, code 01917.

Duration and ages are estimates. Adjust pace and offer help for your group.

Balloon Railway Switch

Player clue 1: Track | Team 1

Six railway switch records disagree with the control desk checks. Recover the route, crew, station, stock and signal evidence. Every check rules out one incorrect switch. Find five badge digits, then use the final sheet. Help each other and ask for hints.

Track desk: Start at S. Follow EVERY arrow one square, including revisited cells. Record only the endpoint digit.

S: 9	1	3	5
2	4	6	8
5	7	9	1

down > right > right > up > left > down > right > down

One arrow = one square. S = start.

Track badge: _____

Balloon Railway Switch

Player clue 2: Crew | Team 1

Crew desk: Each person has ONE different item. Use all four NOT rules. Find Zed's item and copy its digit.

Bell digit 5	Map digit 8	Flag digit 1
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People: Juno, Otis, Zed

- Juno does NOT have Map.
- Otis does NOT have Flag.
- Otis does NOT have Bell.
- Zed does NOT have Flag.

Find Zed's item. Each item is used once.

Crew badge: _____

Balloon Railway Switch

Player clue 3: Station | Team 1

Station desk: Read the letter at each coordinate, in order. Letter = column; number = row. Convert the complete word using the printed table.

Columns: A, B, C, D. Rows: 1, 2, 3.

1	O	Y	B	E	HOME = 8 GEAR = 1 RAIL = 4
2	A	M	G	H	
3	F	J	E	Q	

READ COORDINATES IN ORDER:

D2 > A1 > B2 > C3

Station badge: _____

Balloon Railway Switch

Player clue 4: Stock | Team 1

Stock desk: A return entry lost its amount. Use the opening and closing stock to find the missing return. Apply DONE entries; ignore the CANCELLED plan.

Opening stock: 12. Closing stock: 18.

Received: +5 DONE
Planned: +7 CANCELLED
Issued: -1 DONE
Returned: ? DONE

Missing return = ? units. Ignore cancelled plans.

Stock badge: _____

Balloon Railway Switch

Player clue 5: Signal | Team 1

Signal desk: Decode all shapes in message order. Repeated shapes repeat their letter. Convert the full word using the table.



star = H



diamond = O



heart = M



cross = E



star



diamond



heart



cross

HOME = 5

GEAR = 8

RAIL = 1

Signal badge: _____

Balloon Railway Switch

Player clue 6: Final | Team 1

Compare each record with ALL five badge results. Find the one record matching every column. Copy its complete code, including the first zero.

C1=Track / C2=Crew / C3=Station

C4=Stock / C5=Signal

Switch A: 01907

C1=0 C2=5 C3=8 C4=2 C5=5

Switch B: 01917

C1=9 C2=5 C3=8 C4=2 C5=5

Switch C: 01927

C1=9 C2=6 C3=8 C4=2 C5=5

Switch D: 01937

C1=9 C2=5 C3=9 C4=2 C5=5

Switch E: 01947

C1=9 C2=5 C3=8 C4=3 C5=5

Switch F: 01957

C1=9 C2=5 C3=8 C4=2 C5=6

Final badge: _____

Need help? Ask your host for one hint at a time.

Balloon Railway Switch

Hint cards - level 1 (spoilers; keep with host)

1. Track

Move one square for each arrow. A revisit still counts as a move.

2. Crew

No item can belong to two people. Cross out each forbidden pairing.

3. Station

Columns A-D run left to right. Rows 1-3 run top to bottom.

4. Stock

The missing amount is a return into stock. The cancelled delivery never happened.

5. Signal

Use the letter under each named shape.

6. Final

Keep all five named badge results beside this sheet.

Balloon Railway Switch

Hint cards - level 2 (spoilers; keep with host)

1. Track

After the first 4 arrows, you are at row 1, column 3. Continue from there.

2. Crew

Otis cannot have two items, so Otis must have Map.

3. Station

The first coordinate D2 means column D, row 2. Its letter is H.

4. Stock

Start with 12. Apply +5 then -1. Ignore the cancelled +7.

5. Signal

The first two shapes give H then O. Decode the remaining shapes the same way.

6. Final

Use C1=Track, C2=Crew, C3=Station, C4=Stock, C5=Signal.

Balloon Railway Switch

Hint cards - level 3 (spoilers; keep with host)

1. Track

From that checkpoint follow left, down, right, down. Copy the last cell.

2. Crew

Cross Map off for the other two people. Apply the last NOT rule, then find Zed's item.

3. Station

Begin with H, then read A1, B2, C3 in order. Use the complete word's conversion row.

4. Stock

The known entries leave 16. How much must return to reach the closing stock of 18?

5. Signal

Write HO first, then one letter per remaining shape. Choose the table row matching the whole message.

6. Final

Each wrong record differs in just one column. Cross out all five wrong records, then copy the complete remaining code.

Balloon Railway Switch

Team 1 badge record (no cutting needed)

Write a digit beside each badge as you solve its clue.

Track: _____

Crew: _____

Station: _____

Stock: _____

Signal: _____

Reader: reads the clue. Recorder: writes the digit. Path finder: traces routes. Swap roles every clue.

Balloon Railway Switch

Team 1 paper unlock card

Our five badges are ready. We used the final sheet to find this code:

Host: compare this with your solution guide. When it matches, read the ending and celebrate.

No physical lock or prize is required. You may draw a celebration star on this card.

Balloon Railway Switch

You're invited to a birthday mystery!

Join Birthday Explorer for Balloon Railway Switch.

Select the railway switch record that routes the paper train home.

Date: _____

Time: _____

Place: _____

Bring your curiosity. Paper and pencils are provided. Work together, share ideas and solve six clues.

Designed for ages 8-10. Estimated 30-45 minutes.

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Balloon Railway Switch

Birthday Mystery Explorer

Presented to Birthday Explorer

Team member: _____

For completing Balloon Railway Switch with curiosity,
teamwork and kindness.

The matching switch record routes the imaginary train to Home.
Thank your team for checking the evidence together. Confirmed:
Switch B, code 01917.

Date: _____

Host signature: _____

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