

Snow Train Celebration

HOST ONLY - preparation and story

Includes answers. Keep these pages with an adult.

The snow train dispatch board has lost its final banner code. Put the stops in order, check the luggage weight and decode the carriage message. 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.

Snow Train Celebration

HOST ONLY - solution guide

1. Stops: 9

The only order is Pack flags > Check track > Board train > Reach stop. Position 4 carries 9.

2. Track: 9

The route ends at row 2, column 3. That cell gives 9.

3. Luggage: 9

Remove 3 from 39; share 36 among 4 parcels to get 9. Check $2 \times 9 + 3 = 21$.

4. Staff: 6

Ana has Flag; Eli has Lamp; Max has Bell. Max's item gives 6.

5. Signal: 6

The decoded word is RAIL; its row gives 6.

6. Final: 69969

Start > Stop 1 > Stop 2 > Stop 3 > Stop 4 > Stop 5 > Finish; Staff > Stops > Track > Signal > Luggage

Snow Train Celebration

HOST ONLY - timeline and paper check

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

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

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

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

6 minutes: Solve Staff. 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 correct carriage has its banners. The paper train is ready to depart. Thank your team for checking the evidence together. Confirmed final control code: 69969.

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

Snow Train Celebration

Player clue 1: Stops | Team 1

The snow train dispatch board has lost its final banner code. Put the stops in order, check the luggage weight and decode the carriage message. Find five badge digits, then use the final sheet. Help each other and ask for hints.

Stops desk: Combine every BEFORE rule to order the four actions. Write positions on the whole-sheet cards. Read position 4.

Check track [5]

Reach stop [9]

Board train [7]

Pack flags [3]

Pack flags BEFORE Board train

Check track BEFORE Reach stop

Board train BEFORE Reach stop

Pack flags BEFORE Check track

Check track BEFORE Board train

Read position 4 (positions start at 1).

Stops badge: _____

Snow Train Celebration

Player clue 2: Track | Team 1

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

S: 2	4	6	8
5	7	9	1
8	0	2	4

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

One arrow = one square. S = start.

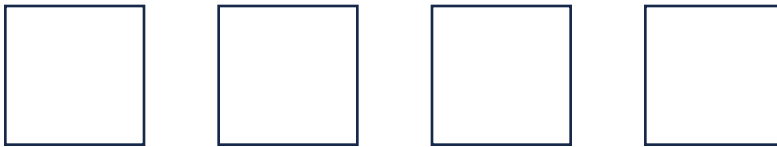
Track badge: _____

Snow Train Celebration

Player clue 3: Luggage | Team 1

Luggage desk: Every parcel has the same whole-number weight. Remove loose units, find ONE parcel and check the second rule.

$$4 \text{ parcels} + 3 \text{ loose units} = 39 \text{ units}$$



$$2 \text{ parcels} + 3 \text{ loose units} = 21 \text{ units}$$

One parcel = ? units. Whole numbers 1-9.

All parcels have equal weight.

Luggage badge: _____

Snow Train Celebration

Player clue 4: Staff | Team 1

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

Flag

digit 3

Bell

digit 6

Lamp

digit 9

People: Ana, Eli, Max

Ana does NOT have Lamp.

Eli does NOT have Flag.

Eli does NOT have Bell.

Max does NOT have Flag.

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

Staff badge: _____

Snow Train Celebration

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 = R



diamond = A



heart = I



cross = L



star



diamond



heart



cross

RAIL = 6

GEAR = 9

TICK = 2

Signal badge: _____

Snow Train Celebration

Player clue 6: Final | Team 1

Find the route from Start to Finish visiting Stop 1-5. Reject branches that cannot finish. Join the badge digits in route order.

Start > Stop 1 OR Dead end

Stop 1 (Staff) > Stop 2

Stop 2 (Stops) > Stop 3 OR Dead end

Stop 3 (Track) > Stop 4

Stop 4 (Signal) > Stop 5

Stop 5 (Luggage) > Finish

Required: Stop 1, 2, 3, 4, 5. Dead end has no exit.

Final badge: _____

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

Snow Train Celebration

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

1. Stops

The printed cards are deliberately out of order.

2. Track

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

3. Luggage

Loose units are not parcels. Every parcel has equal weight.

4. Staff

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

5. Signal

Use the letter under each named shape.

6. Final

Keep all five named badge results beside this sheet.

Snow Train Celebration

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

1. Stops

Pack flags must come first. Work out which action comes directly after it.

2. Track

After the first 3 arrows, you are at row 2, column 3. Continue from there.

3. Luggage

Remove 3 loose units from 39. That leaves 36 for the equal parcels.

4. Staff

Eli cannot have two items, so Eli must have Lamp.

5. Signal

The first two shapes give R then A. Decode the remaining shapes the same way.

6. Final

At Start, choose Stop 1. Dead end has no path to Finish.

Snow Train Celebration

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

1. Stops

The first two actions are Pack flags, then Check track. Finish the chain and read position 4.

2. Track

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

3. Luggage

Share 36 equally among 4 parcels. Substitute one parcel's weight into the second rule.

4. Staff

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

5. Signal

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

6. Final

Follow Stop 1, 2, 3, 4, 5 to Finish. Copy the badge digit beside each stop in that order.

Snow Train Celebration

Team 1 badge record (no cutting needed)

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

Stops: _____

Track: _____

Luggage: _____

Staff: _____

Signal: _____

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

Snow Train Celebration

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.

Snow Train Celebration

You're invited to a birthday mystery!

Join Birthday Explorer for Snow Train Celebration.

Deliver the paper train banners to the correct carriage.

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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Snow Train Celebration

Birthday Mystery Explorer

Presented to Birthday Explorer

Team member: _____

For completing Snow Train Celebration with curiosity,
teamwork and kindness.

The correct carriage has its banners. The paper train is ready to
depart. Thank your team for checking the evidence together.

Confirmed final control code: 69969.

Date: _____

Host signature: _____

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