

Meteor Route Control

HOST ONLY - preparation and story

Includes answers. Keep these pages and all hint pages with the adult host.

Welcome to the meteor route control. One shortcut is closed and a supply stop is required before the final crossing. Your team has the original records on the table. First recover five pieces of information, then use the final plan to plot the survey supply route. Keep every result beside its badge so another teammate can check your reasoning.

1. Print the six player sheets and two record sheets for each team. Keep answers and hints with the host.
2. Lay out Travel map (one way), Supply cards, the remaining clue sheets and the final plan. All task records are printed inside the sheets; no extra prop is needed.
3. After each clue, pass roles one seat clockwise. With two players, combine Reader with Recorder and Checker with Builder. With five or six, add a second checker and a source finder; everyone explains one decision.

4 players; 1 team. Give each team 6 player sheets and 2 record sheets. Share one host guide and one set of three hint levels.

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

Optional: 4 invitations or certificates, only if selected.

Meteor Route Control

HOST ONLY - solution guide

1. Path: S-A-C-F

Discard closed roads and paths missing C. Add the costs of every remaining edge; the lowest eligible total determines the whole route. Result: S-A-C-F.

2. Kit: A-B

Compare coverage before weight. Only complete kits qualify; minimize their combined weight and report the selected cards in alphabetical order. Result: A-B.

3. Pilot: 0

Ari has Radio; Kai has Map; Uma has Log. Uma's item gives 0. Result: 0.

4. Beacon: 7

The decoded word is SAFE; its row gives 7. Result: 7.

5. Point: 8

The route ends at row 3, column 3. That cell gives 8. Result: 8.

6. Final: A-D-E-H-J

Recover all five loads. The cheaper road works for a small load; a large load needs the higher-capacity road. The resulting five-leg route records every necessary decision. Checked result: A-D-E-H-J.

Meteor Route Control

HOST ONLY - timeline, story and ending

3 minutes: Read the opening. Show the evidence record and choose starting roles.

5 minutes: Solve Path. Offer one hint at a time and rotate roles after checking.

5 minutes: Solve Kit. Offer one hint at a time and rotate roles after checking.

5 minutes: Solve Pilot. Offer one hint at a time and rotate roles after checking.

5 minutes: Solve Beacon. Offer one hint at a time and rotate roles after checking.

5 minutes: Solve Point. Offer one hint at a time and rotate roles after checking.

7 minutes: Build the five-leg delivery route using all five results.

3 minutes: Read the ending. Ask each teammate to explain one rejected alternative.

After Kit: A cheap road can still fail a load limit or miss a required stop. Keep cost and capacity as separate checks. Pass the record sheet to a new checker before opening the next clue.

After Beacon: Four results are recorded. Each teammate points to a source supporting one result. Complete the fifth check before building the five-leg delivery route.

Check every result using the solution guide. Offer the next hint only when requested; save the answer reveal until the group is ready.

The delivery follows route A-D-E-H-J; every road can carry its assigned load. Thank each teammate for a different piece of reasoning.

Explain one tempting wrong choice and the evidence that ruled it out. Show how each of the five results affected the five-leg delivery route. If a clue is missing, say what remains uncertain before reopening that sheet.

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

Meteor Route Control

Player clue 1: Path | Team 1

One shortcut is closed and a supply stop is required before the final crossing. We will use the records on the table to plot the survey supply route. Share the reading, explain each choice and keep the five results for the final plan.

Trace a legal supply journey from S to F. The map's arrows are one-way roads. Visit every required stop, stay inside the travel budget and use the cheapest complete journey. Report all stop letters.

Travel map (one way)

S > A: 2 units

S > B: 1 units

A > C: 2 units

B > C: 2 units CLOSED

C > F: 2 units

B > F: 2 units

A > F: 7 units

Journey rules

Start S; finish F; limit 7 units.

Visit C. Use the least total cost.

Write every stop in order, with hyphens.

Path result: _____

Meteor Route Control

Player clue 2: Kit | Team 1

Pack a kit that supplies all three needs. One card may cover two needs, but its weight is counted once. Choose the lightest complete kit within the carrier limit. Report its card letters alphabetically.

Supply cards

A: weight 3; gives tie+light

B: weight 2; gives mark

C: weight 2; gives tie

D: weight 4; gives light+mark

E: weight 7; gives tie+light+mark

Packing order

Capacity 7; must cover tie, light, mark.

Use the lightest complete kit. Each card once.

Write chosen card IDs alphabetically, with hyphens.

Kit result: _____

Meteor Route Control

Player clue 3: Pilot | Team 1

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

Map

digit 4

Radio

digit 7

Log

digit 0

People: Ari, Kai, Uma

Ari does NOT have Map.

Kai does NOT have Radio.

Kai does NOT have Log.

Uma does NOT have Radio.

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

Pilot result: _____

Meteor Route Control

Player clue 4: Beacon | Team 1

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



triangle = S



square = A



circle = F



star = E



triangle



square



circle



star

SAFE = 7

BEAM = 0

DOCK = 3

Beacon result: _____

Meteor Route Control

Player clue 5: Point | Team 1

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

S: 8	0	2	4
1	3	5	7
4	6	8	0

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

One arrow = one square. S = start.

Point result: _____

Meteor Route Control

Player clue 6: Final | Team 1

Use each result to recover the load for its leg. At each leg choose the cheapest road that can carry that load. A road with too little capacity is closed to this cargo. Report the five road IDs in journey order.

Use your results from: Path, Kit, Pilot, Beacon, Point.

Cargo key, one leg at a time

Leg 1 (Path): S-A-C-F=2; S-A-F=4

Leg 2 (Kit): A-B-C=2; A-B=4

Leg 3 (Pilot): 0=2; 4=4

Leg 4 (Beacon): 0=2; 7=4

Leg 5 (Point): 0=4; 8=2

Roads: load capacity / travel cost

1: A 3/2 | B 6/4

2: D 6/4 | C 3/2

3: E 3/2 | F 6/4

4: H 6/4 | G 3/2

5: J 3/2 | K 6/4

Route rule

Choose the cheapest road carrying each load.

Report the five road IDs in leg order, with hyphens.

Final result: _____

Ask your host to check your final result and read the ending.

Meteor Route Control

Hint level 1 - HOST ONLY

1. Path

Find S, F, the required-stop list and any CLOSED edge.

2. Kit

Read each supply card and the three required needs.

3. Pilot

Find the three people, the three items and the forbidden pairings.

4. Beacon

Find the symbol key and the message strip.

5. Point

Find the starting square and read the full move list.

6. Final

Keep the five named results beside the final plan and find the key for each badge.

Meteor Route Control

Hint level 2 - HOST ONLY

1. Path

A cheap shortcut is not a complete journey if it skips a required stop.

2. Kit

A light card alone may leave a need uncovered; a shared supply counts for both needs.

3. Pilot

Each item is used once. A person ruled out of two items must have the third.

4. Beacon

Use the same key every time a symbol repeats. Read the message in its printed order.

5. Point

Each move changes just one square. Keep track of row and column after each move.

6. Final

Each badge controls a different fact, road leg, order note, pulse or habitat layer. Use the matching key exactly once.

Meteor Route Control

Hint level 3 - HOST ONLY

1. Path

List the legal complete paths, add their edge costs and compare only paths that meet every condition.

2. Kit

Compare complete combinations, adding each chosen card weight once. Reject any combination over the limit before choosing the lightest.

3. Pilot

Place the most restricted person, remove that item from the others, then use the remaining rule. Read the target person only after checking all pairs.

4. Beacon

Write the complete decoded word, check every symbol, then use the conversion row for that exact word.

5. Point

Trace the moves one at a time, then retrace them to check the final square before recording its value.

6. Final

Check the completed product against all five recovered facts. If two answers remain, locate the fact that distinguishes them rather than guessing.

Meteor Route Control

Team 1 result record

Write the complete result from each clue. Results can be words, routes, orders, settings or numbers.

Path: _____

Kit: _____

Pilot: _____

Beacon: _____

Point: _____

Keep this record beside the final clue. Copy results exactly, including any leading zero.

Reader / Recorder / Evidence checker / Route or model builder

After each clue, pass roles one seat clockwise. With two players, combine Reader with Recorder and Checker with Builder. With five or six, add a second checker and a source finder; everyone explains one decision.

Meteor Route Control

Team 1 final result and celebration

Our final challenge: Final

We combined our earlier clues to decide:

We know it works because:

Host: compare the result with your solution guide. Read the ending when it matches, then let the team explain one discovery.

No physical lock or prize is required. Draw a celebration star here if you like.

Meteor Route Control

You're invited to a mystery!

Join Birthday Explorer for Meteor Route Control.

One shortcut is closed and a supply stop is required before the final crossing. Work together to plot the survey supply route.

Date: _____

Time: _____

Place: _____

Bring your curiosity. Paper and pencils are provided. Share ideas and solve six clues together.

Designed for ages 8-10. Estimated 35-50 minutes.

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Meteor Route Control

Mystery Explorer

Presented to Birthday Explorer

Team member: _____

For completing Meteor Route Control with curiosity,
teamwork and kindness.

The delivery follows route A-D-E-H-J; every road can carry its assigned
load. Thank each teammate for a different piece of reasoning.

Date: _____

Host signature: _____

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