

Satellite Signal Desk

HOST ONLY - preparation and story

Includes answers. Keep these pages with an adult.

The satellite desk received a coded message, a damaged copy and three operator records. Use the printed evidence to choose the valid call-sign card. 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.

Satellite Signal Desk

HOST ONLY - solution guide

1. Message: 4

The decoded word is BEAM; its row gives 4.

2. Copy: 3

Different positions are 1, 4, 6. There are 3 differences.

3. Operator: 7

Nova has Panel; Orion has Dish; Lyra has Relay. Lyra's item gives 7.

4. Battery: 4

Remove 4 from 12; share 8 among 2 parcels to get 4. Check $2 \times 4 + 3 = 11$.

5. Channel: 7

B3, C1, D2, A1 reads BEAM. The conversion table gives 7.

6. Final: 02107

Only Record A matches all five columns. Copy its printed code 02107.

Satellite Signal Desk

HOST ONLY - timeline and paper check

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

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

3 minutes: Solve Copy. Offer one hint level at a time if wanted.

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

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

5 minutes: Solve Channel. 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 satellite call sign is recovered. The paper control room has a clear signal. Thank your team for checking the evidence together. Confirmed: Record A, code 02107.

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

Satellite Signal Desk

Player clue 1: Message | Team 1

The satellite desk received a coded message, a damaged copy and three operator records. Use the printed evidence to choose the valid call-sign card. Find five badge digits, then use the final sheet. Help each other and ask for hints.

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



heart = B



cross = E



hexagon = A



triangle = M



heart



cross



hexagon



triangle

BEAM = 4

DOCK = 7

STAR = 0

Message badge: _____

Satellite Signal Desk

Player clue 2: Copy | Team 1

Copy desk: Compare the two records at matching numbered positions. Count different pairs once each; ignore box outlines.

Compare matching numbered positions.

A

















1

2

3

4

5

6

7

8

B

















1

2

3

4

5

6

7

8

Do not count title, labels, or boxes as differences.

Copy badge: _____

Satellite Signal Desk

Player clue 3: Operator | Team 1

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

Dish

digit 1

Panel

digit 4

Relay

digit 7

People: Nova, Orion, Lyra

Nova does NOT have Dish.

Orion does NOT have Panel.

Orion does NOT have Relay.

Lyra does NOT have Panel.

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

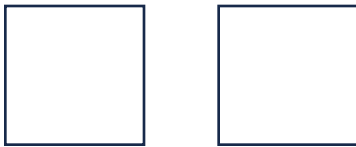
Operator badge: _____

Satellite Signal Desk

Player clue 4: Battery | Team 1

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

2 parcels + 4 loose units = 12 units



2 parcels + 3 loose units = 11 units

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

All parcels have equal weight.

Battery badge: _____

Satellite Signal Desk

Player clue 5: Channel | Team 1

Channel 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	M	A	E	G
2	C	F	J	A
3	H	B	P	S

BEAM = 7

DOCK = 0

STAR = 3

READ COORDINATES IN ORDER:

B3 > C1 > D2 > A1

Channel badge: _____

Satellite Signal Desk

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=Message / C2=Copy / C3=Operator

C4=Battery / C5=Channel

Record A: 02107

C1=4 C2=3 C3=7 C4=4 C5=7

Record B: 02117

C1=5 C2=3 C3=7 C4=4 C5=7

Record C: 02127

C1=4 C2=4 C3=7 C4=4 C5=7

Record D: 02137

C1=4 C2=3 C3=8 C4=4 C5=7

Record E: 02147

C1=4 C2=3 C3=7 C4=5 C5=7

Record F: 02157

C1=4 C2=3 C3=7 C4=4 C5=8

Final badge: _____

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

Satellite Signal Desk

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

1. Message

Use the letter under each named shape.

2. Copy

Compare position 1 with position 1, not with a nearby matching shape.

3. Operator

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

4. Battery

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

5. Channel

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

6. Final

Keep all five named badge results beside this sheet.

Satellite Signal Desk

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

1. Message

The first two shapes give B then E. Decode the remaining shapes the same way.

2. Copy

Position 1 is one difference: heart in A, hexagon in B. Mark it once.

3. Operator

Orion cannot have two items, so Orion must have Dish.

4. Battery

Remove 4 loose units from 12. That leaves 8 for the equal parcels.

5. Channel

The first coordinate B3 means column B, row 3. Its letter is B.

6. Final

Use C1=Message, C2=Copy, C3=Operator, C4=Battery, C5=Channel.

Satellite Signal Desk

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

1. Message

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

2. Copy

Compare the remaining numbered pairs one by one. Add one mark for each unequal pair, then count all your marks.

3. Operator

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

4. Battery

Share 8 equally among 2 parcels. Substitute one parcel's weight into the second rule.

5. Channel

Begin with B, then read C1, D2, A1 in order. Use the complete word's conversion row.

6. Final

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

Satellite Signal Desk

Team 1 badge record (no cutting needed)

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

Message: _____

Copy: _____

Operator: _____

Battery: _____

Channel: _____

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

Satellite Signal Desk

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.

Satellite Signal Desk

You're invited to a birthday mystery!

Join Birthday Explorer for Satellite Signal Desk.

Recover the missing satellite call sign.

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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Satellite Signal Desk

Birthday Mystery Explorer

Presented to Birthday Explorer

Team member: _____

For completing Satellite Signal Desk with curiosity,
teamwork and kindness.

The satellite call sign is recovered. The paper control room has a clear
signal. Thank your team for checking the evidence together.

Confirmed: Record A, code 02107.

Date: _____

Host signature: _____

Satellite Signal Desk

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