

Clockmaker Birthday Repair

HOST ONLY - preparation and story

Includes answers. Keep these pages with an adult.

The clock repair sheet has been mixed up with a spare-parts log. Restore the job order, decode the dial, match the repairers and check the remaining parts. 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.

Clockmaker Birthday Repair

HOST ONLY - solution guide

1. Job: 5

The only order is Stop clock > Inspect gear > Fit spring > Test hands. Position 4 carries 5.

2. Dial: 3

The decoded word is TICK; its row gives 3.

3. Parts: 6

Known stock: $10 + 3 - 3 = 10$. Closing stock 16 minus 10 gives the missing return 6. Cancelled +7 never arrived.

4. Repairer: 2

Tess has Gear; Raj has Hand; Kit has Spring. Kit's item gives 2.

5. Face: 3

Different positions are 2, 5, 8. There are 3 differences.

6. Final: 33652

E3 > B3 > C3 > A3 > D3

Clockmaker Birthday Repair

HOST ONLY - timeline and paper check

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

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

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

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

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

3 minutes: Solve Face. 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 repair code is correct. Draw the hands on your paper clock to celebrate. Thank your team for checking the evidence together. Confirmed final control code: 33652.

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

Clockmaker Birthday Repair

Player clue 1: Job | Team 1

The clock repair sheet has been mixed up with a spare-parts log. Restore the job order, decode the dial, match the repairers and check the remaining parts. Find five badge digits, then use the final sheet. Help each other and ask for hints.

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

Test hands [5]	Inspect gear [1]
Stop clock [9]	Fit spring [3]

- Stop clock BEFORE Fit spring
- Inspect gear BEFORE Test hands
- Fit spring BEFORE Test hands
- Stop clock BEFORE Inspect gear
- Inspect gear BEFORE Fit spring

Read position 4 (positions start at 1).

Job badge: _____

Clockmaker Birthday Repair

Player clue 2: Dial | Team 1

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



square = T



circle = I



star = C



diamond = K



square



circle



star



diamond

TICK = 3

GEAR = 6

RAIL = 9

Dial badge: _____

Clockmaker Birthday Repair

Player clue 3: Parts | Team 1

Parts 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: 10. Closing stock: 16.

Received: +3 DONE
Planned: +7 CANCELLED
Issued: -3 DONE
Returned: ? DONE

Missing return = ? units. Ignore cancelled plans.

Parts badge: _____

Clockmaker Birthday Repair

Player clue 4: Repairer | Team 1

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

Gear digit 9	Spring digit 2	Hand digit 5
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People: Tess, Raj, Kit

- Tess does NOT have Hand.
- Raj does NOT have Gear.
- Raj does NOT have Spring.
- Kit does NOT have Gear.

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

Repairer badge: _____

Clockmaker Birthday Repair

Player clue 5: Face | Team 1

Face 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.

Face badge: _____

Clockmaker Birthday Repair

Player clue 6: Final | Team 1

Copy each badge digit into its named slot. Read the slots in the printed order; join all five digits.

A3: Job ?	B3: Dial ?	C3: Parts ?
D3: Repairer ?	E3: Face ?	

READ SLOTS IN THIS ORDER:

E3 > B3 > C3 > A3 > D3

Final badge: _____

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

Clockmaker Birthday Repair

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

1. Job

The printed cards are deliberately out of order.

2. Dial

Use the letter under each named shape.

3. Parts

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

4. Repairer

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

5. Face

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

6. Final

Keep all five named badge results beside this sheet.

Clockmaker Birthday Repair

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

1. Job

Stop clock must come first. Work out which action comes directly after it.

2. Dial

The first two shapes give T then I. Decode the remaining shapes the same way.

3. Parts

Start with 10. Apply +3 then -3. Ignore the cancelled +7.

4. Repairer

Raj cannot have two items, so Raj must have Hand.

5. Face

Position 2 is one difference: circle in A, diamond in B. Mark it once.

6. Final

E3 is read first; it holds Face.

Clockmaker Birthday Repair

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

1. Job

The first two actions are Stop clock, then Inspect gear. Finish the chain and read position 4.

2. Dial

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

3. Parts

The known entries leave 10. How much must return to reach the closing stock of 16?

4. Repairer

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

5. Face

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

6. Final

Read slots E3, B3, C3, A3, D3. Copy every stored digit in that order, including zero.

Clockmaker Birthday Repair

Team 1 badge record (no cutting needed)

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

Job: _____

Dial: _____

Parts: _____

Repairer: _____

Face: _____

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

Clockmaker Birthday Repair

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.

Clockmaker Birthday Repair

You're invited to a birthday mystery!

Join Birthday Explorer for Clockmaker Birthday Repair.

Restart the paper clock using the repair workshop records.

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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Clockmaker Birthday Repair

Birthday Mystery Explorer

Presented to Birthday Explorer

Team member: _____

For completing Clockmaker Birthday Repair with curiosity, teamwork and kindness.

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Confirmed final control code: 33652.

Date: _____

Host signature: _____

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