

Inventor Relay Assembly

HOST ONLY - preparation and story

Includes answers. Keep these pages with an adult.

The invention desk mixed its build sequence with a cancelled parts entry. Match the builders, compare the relay diagrams and decode the final test signal. 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.

Inventor Relay Assembly

HOST ONLY - solution guide

1. Build: 9

The only order is Read plan > Fit lever > Join relay > Test model. Position 2 carries 9.

2. Parts: 1

Known stock: $11 + 3 - 2 = 12$. Closing stock 13 minus 12 gives the missing return 1. Cancelled +7 never arrived.

3. Builder: 0

Dee has Wheel; Mo has Lever; Xin has Relay. Xin's item gives 0.

4. Diagram: 3

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

5. Test: 1

The decoded word is TEST; its row gives 1.

6. Final: 90311

A1 > C1 > D1 > B1 > E1

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HOST ONLY - timeline and paper check

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

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

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

4 minutes: Solve Test. 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 relay test record is recovered. Draw your own imaginary invention on the unlock card. Thank your team for checking the evidence together. Confirmed final control code: 90311.

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