

Can One Kitchen Change Help Two People?

Map two everyday routes, find where each person gets stuck, make one change, and use evidence to decide who it helps.

AGES 8–13

15 MINUTES

NO SPECIAL BACKGROUND NEEDED

PRINT OR USE ON SCREEN

TODAY'S MISSION

Treat the kitchen as a small shared system. Follow two people's routes, identify two barriers, and test whether one design change helps both people.

PEOPLE



ROUTES



ONE CHANGE

YOU NEED

- 4 small paper labels
- 2 coins or buttons
- 1 pencil
- Optional:** sketch the four labels instead.

1

2 MIN

Build this ready-made kitchen map

Label four papers: CUP SHELF, SINK, TABLE, and CHAIR. Place the CHAIR between the SINK and TABLE.

Ready example: Put the CUP SHELF above the SINK. Put the TABLE across from the SINK, with the CHAIR blocking the shortest path between them.

2

3 MIN

Follow two people's routes

Person A: a child gets a cup, fills it at the sink, then goes to the table.

Person B: an adult carries two plates from the sink to the table.

Use one coin for each person. Move both coins through their routes. Do not move the chair yet.

Person A's route is _____. Person B's route is _____.

3

2 MIN

Find the barriers—with evidence

Say: "Point to the exact place where each route becomes difficult."

Ready answers: Person A cannot easily reach a high cup. Both people must go around the chair. Person B has less space because both hands are full.

The map shows _____ is difficult because _____.

4

5 MIN

Choose one change; predict who benefits

Choose only one: move the CHAIR, place one CUP lower, or move the TABLE. Say who you think it will help before testing.

☐ Move chair

☐ Lower cup

☐ Move table

Example prediction: "Moving the chair will help both routes, but the child may still need help reaching the cup."

5

3 MIN

Retest both routes; name the tradeoff

Move both coins again. Ask: "Who benefits? What problem is still not solved? Did our change create a new problem?"

Clear example: Moving the chair shortens both routes. The high cup is still difficult for the child, but no new barrier was created.

Our change helped _____. It did not solve _____.

If your child is unsure

"Show me the route with your finger first."

"Where does the coin have to turn or go around?"

"Test the same change for both people."

What to notice as a parent

- ✓ Can your child trace two different users' routes?
- ✓ Do they point to map evidence, not just preference?
- ✓ Can they predict who benefits before changing the map?
- ✓ Can they name what remains unsolved?

One change rarely solves everything

A strong design does not have to be perfect. It should solve a named problem, help a specific person, use evidence, and acknowledge the problem or tradeoff that remains.

Your 15 minutes together

You just practiced mapping a shared system, noticing different users, testing one design change, and explaining benefits and tradeoffs with evidence.

Want to continue this kind of learning?

The 12-week Smart City Lab develops this same habit with city maps, resident needs, infrastructure connections, risks, budgets, evidence, and tested design tradeoffs.

SEE WHAT THE
12-WEEK LAB INCLUDES →