

At the office



Learning objectives

- **Using and applying:** Solve multi-step problems
- **Handling data:** Solve problems by collecting, selecting, processing, presenting and interpreting data

Problem-solving strategy

Work backwards

Setting the scene

This is a group or paired activity. Aldo and Carla work in an office block. From the clues presented, ask the children to work out on which floors of the office block Aldo and Carla work. Children will find that they will need to discuss this activity at each stage and that there will need to be a consensus before moving each character – you will see a lot of head scratching! Stress that each step has to be correct in order to find the answer; one wrong move will place either Aldo or Carla in the wrong office. (NB: Count the ground floor as 'floor 1')

Solving the problem

Working backwards from the very last clue will help to solve this problem. Spatially this may be challenging for some children, in which case it would be useful to use either counters or the names of the characters on the board to plot their progress.

Key questions

Representing: How would you record each clue? Although you can move Aldo and Carla on the screen, what other strategies can you use to ensure you are taking the correct steps?

Reasoning: What is the starting point for this problem? What information is the most important in helping you solve it? (Knowing the final movements that take Aldo and Carla down to the ground floor.)

Communicating: On which floors are their offices located? How can you clearly demonstrate that your answer is correct? (Ask children to come to the board to show each character's movements.)

Differentiation

Less confident: Children may need support with their spatial learning for this activity. In this case it is important that the group talk to each other and that they agree the characters' locations at each stage. Use either the interactive whiteboard or a pre-drawn tower with counters as support when moving the characters. Play the activity on a number of occasions until the children become familiar with the 'working backwards' strategy.

More confident: Ask the children to create their own 'story' to challenge friends. It is important to note that the challenge increases with the number of stages in each story. Encourage creativity by explaining why the characters have to go up and down (maybe to get to the photocopier or for a meeting).

Follow up

Ask the children to follow the instructions on page 13 to find out where Aldo and Carla's new offices are located.

Problems bank

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1. Follow each instruction carefully, starting with the final one. The clues change each time the activity is played.

2. Move the letters up and down to find the characters' offices.

3. Click 'OK' to check answers.