

Introducing mass exploration activities



You will need: the same balance from the introduction, a further set of paired objects, and a small bag or pillowcase for the mystery bag activity.

1 Balance and check

Students use the balance to compare pairs of objects, predicting first and then checking.

"Which do you think is heavier? Now check with the balance. Were you right?"

2 Mystery bag guess

Students reach into a bag without looking, feel an object, and guess whether it is heavier or lighter than a reference object, then check their guess on the balance.

"Feel it without looking. Do you think it's heavier or lighter than our reference block? Check on the balance."

3 Heavier or lighter partner game

In pairs, each student secretly chooses an object. Both reveal at the same time, predict whose object is heavier, then check on the balance, keeping score of correct guesses across several rounds.

"You've both chosen an object without seeing each other's. Before we check, guess whose is heavier. Let's see who guesses right the most times."

4 Order three objects

Using the balance for repeated pairwise comparisons, students order three objects from lightest to heaviest.

"Which is the lightest of the three? How did you work that out using the balance?"

5 Non-example: trusting your eyes over the balance

Show two objects that look similar in size but balance unevenly, and discuss why sight alone isn't reliable for mass.

"These two look about the same size, but the balance disagrees. Which should we trust?"