

W4L1 | Counter crossings

Monday | 09:30–10:10 | Introduce | Supported route

Name: _____ Date: _____

Core first. Your teacher will select the questions that fit this lesson. Write, speak, point or dictate your own words. Keep your first attempt so you can improve it.

Your scaffold: Net movement = crossings one way minus crossings the other way. Start: “More particles move from ___ to ___ because...”

Work together

Draw two equal-volume regions: 12 particles left and 3 right. Predict the initial net direction.

Illustrative model/sample data - these are not measurements made by this class.

Model interval	Left → right	Right → left
Early	8	2
At balance	5	5

Your labelled sketch / model

1. Use the early crossing counts to calculate net movement and direction.

2. At balance, how much net movement is there? What is still happening?

W4L1 | Continue and improve

Supported route | Use after the core questions when directed

3. Explain one reason a higher temperature can increase diffusion rate.

Optional transfer

Why must the two starting regions have equal volumes if particle counts alone are used to compare concentration?

Build your response: Point to the evidence. Name the science idea. Link them using “because”. Ask for a visual cue before asking for a worked answer.

Improve the same work

One correction I made, and why:

My request for next time: _____