

W4L1 | Counter crossings

Monday | 09:30–10:10 | Introduce | Depth 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.

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

Depth route | Use after the core questions when directed

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

Transfer challenge

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

Go deeper: State a limitation, assumption or condition in your explanation. Say what extra evidence would make it stronger.

Improve the same work

One correction I made, and why:

My request for next time: _____