

Teacher guide: Probability pathway and repair

Objective: Select a probability representation and repair common errors.

Calculator condition: Non-calculator core; calculator optional only for checking where labelled.

Learning Cycle plan

Stage	Time	Teacher move	Evidence to collect
Connect & Check	5 min	State the objective and timeline. Retrieve frequency trees and probability models or a prerequisite. Diagnose a common error before modelling.	Independent written response, correction or verbal explanation.
Share	7 min	Pairs compare methods or predict a result for probability pathway and repair. Ask for a reason, not only an answer.	Independent written response, correction or verbal explanation.
Present	10 min	Foundation: sample spaces and frequency trees. Higher: conditional and dependent events	Independent written response, correction or verbal explanation.
Apply	25 min	Compare two approaches to a tier-matched event problem Use guided support, then remove it for independent working.	Independent written response, correction or verbal explanation.
Recall & Review	8 min	Revisit the objective. Learners solve a fresh item without prompts, explain a check, correct one error and record the next practice.	Independent written response, correction or verbal explanation.

Differentiation

- All learners reach the same objective; route choice changes the journey, not the standard.
- Use visual, method and explanation routes to support access.
- Remove prompts before exit evidence.
- Use stretch and deep challenge only after the core method is secure.

Assessment response

- Compare corrected responses with the original diagnostic and a fresh unprompted question. Record the misconception repaired and a delayed check. NC/C selected to purpose; label each question.

Recall & Review: feedback and extension integration

Lesson L076: Probability pathway and repair

Objective: Select a probability representation and repair common errors.

Timing for a 60-minute lesson

0-7 Connect & Check; 7-14 Share; 14-25 Present/model; 25-44 Apply route choice/practice; 44-52 independent exam-style check; 52-60 Recall & Review, WWW/EBI and next step.

Recall & Review evidence

At the end of the lesson, solve a fresh question without prompts, explain one check, correct one error and record the next practice step.

What Went Well (WWW)

I used my working and assessment evidence to identify the exact mathematical step that was secure and the specific misconception that needs attention.

Even Better If (EBI)

I will correct one precise step, explain why the correction works and complete a fresh delayed question without the original scaffold.

Integrated stretch and deep challenge

Stretch: Two fair dice are rolled. Find $P(\text{at least one six})$.

Deep challenge: A bag with 3 red and 2 blue is drawn twice without replacement. Are the events independent? Show with probabilities.

Teacher use

Use the What Went Well (WWW) and Even Better If (EBI) prompts to write mathematics-specific feedback linked to the objective. Do not accept generic praise: identify the method, representation, reasoning or checking step that improved, then set a fresh next-step question.

Assessment evidence to inspect: Compare corrected responses with the original diagnostic and a fresh unprompted question. Record the misconception repaired and a delayed check. NC/C selected to purpose; label each question.