

Equilibrium in Context — Analogies & Misconception Deep-Dive

Use this worksheet after reading the lesson to practise the key ideas and prove you can meet the success criteria.

Name _____

Date _____

Class _____

1. Key Ideas

★ Consolidation Lesson — Deepening L01–L03. Three students just answered the same exam question about dynamic equilibrium. Only one of them is correct. Before reading on — can you spot who?

- The two most common equilibrium misconceptions and why they are wrong
- Why "equal concentrations" and "reaction stopped" are fundamentally wrong descriptions of dynamic equilibrium

2. Success Criteria

By the end, you should be able to:

- The two most common equilibrium misconceptions and why they are wrong
- Two analogies that correctly model dynamic equilibrium
- That equilibrium can be approached from either direction

3. Key Terms

Dynamic equilibrium

A state where forward and reverse reaction rates are equal.

Equilibrium constant (K_{eq})

The ratio of product to reactant concentrations at equilibrium.

Le Chatelier's Principle

A system at equilibrium shifts to minimise applied disturbances.

Reaction quotient (Q)

The ratio of product to reactant concentrations at any instant.

Solubility product (K_{sp})

The equilibrium constant for dissolution of a sparingly soluble salt.

Common ion effect

The decrease in solubility caused by presence of a common ion in solution.

4. Activity: Build the Lesson Map

Use the lesson to complete the table. Keep answers brief but specific.

Prompt	Your answer
Main concept	
Important example	
Common mistake to avoid	
How this links to the next lesson	

5. Short Answer Questions

1. Explain this lesson goal in your own words: "The two most common equilibrium misconceptions and why they are wrong". Use one specific example from the lesson.

BAND 3 **2 MARKS**

2. Apply this idea to a new example: "Two analogies that correctly model dynamic equilibrium". Show your reasoning clearly.

BAND 4 **3 MARKS**

3. Analyse why this idea matters for understanding Equilibrium in Context — Analogies & Misconception Deep-Dive: "That equilibrium can be approached from either direction".

BAND 5 **4 MARKS**

6. Extend: Apply the Idea

BAND 5/6

5 MARKS

A student gives a memorised answer about Equilibrium in Context — Analogies & Misconception Deep-Dive but does not use evidence or reasoning.

Improve the answer by writing a stronger response that uses accurate terminology, a relevant example and a clear explanation.

7. Multiple Choice

1. What is the best first step when answering a question about Equilibrium in Context — Analogies & Misconception Deep-Dive?

- A. Identify the key concept being tested
- B. Write every fact from memory
- C. Ignore the command word
- D. Skip examples and evidence

2. Which answer would show stronger understanding of Equilibrium in Context — Analogies & Misconception Deep-Dive?

- A. An answer with accurate terms and reasoning
- B. A copied definition only
- C. A single-word response
- D. An answer with no example

3. What should you do if a question asks you to explain?

- A. Link the idea to a reason or cause
- B. List unrelated facts
- C. Only draw a diagram
- D. Write the shortest possible answer

8. Success Criteria Proof

Finish with evidence that you can do each success criterion.

SUCCESS CRITERION 1

Prove that you can: The two most common equilibrium misconceptions and why they are wrong

BAND 3 **2 MARKS**

SUCCESS CRITERION 2

Prove that you can: Two analogies that correctly model dynamic equilibrium

BAND 4 **3 MARKS**

SUCCESS CRITERION 3

Prove that you can: That equilibrium can be approached from either direction

BAND 5 **4 MARKS**

One thing I still need help with:
