CHEMISTRY YEAR 12 - MODULE 5 - LESSON 7

Industrial Applications & Collision Theory Explanations

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

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- Key facts and terms for Industrial Applications & Collision Theory Explanations
- How the main ideas in Industrial Applications & Collision Theory Explanations connect

2. Success Criteria

By the end, you should be able to:

- Key facts and terms for Industrial Applications & Collision Theory Explanations
- Where this lesson fits in Module 5
- How the main ideas in Industrial Applications & Collision Theory Explanations connect

3. Key Terms

Reaction
A reaction where two or more reactants combine to form a single product.

Effect on yield
The amount of product actually obtained from a reaction, expressed as a percentage of the theoretical maximum.

Industrial compromise
The Industrial Compromise — Why 400–500°C, 150–300 atm, Iron Catalyst Temperature — 400–500°C: A compromise between yield and rate.

Dynamic equilibrium
A state where forward and reverse reaction rates are equal.

Equilibrium constant (Keq)
The ratio of product to reactant concentrations at equilibrium.

Le Chatelier's Principle
A system at equilibrium shifts to minimise applied disturbances.

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: "Key facts and terms for Industrial Applications & Collision Theory Explanations". Use one specific example from the lesson.

BAND 3 2 MARKS

2. Apply this idea to a new example: "Where this lesson fits in Module 5". Show your reasoning clearly.

BAND 4 3 MARKS

3. Analyse why this idea matters for understanding Industrial Applications & Collision Theory Explanations: "How the main ideas in Industrial Applications & Collision Theory Explanations connect".

BAND 5 4 MARKS

6. Extend: Apply the Idea

BAND 5/6 5 MARKS

A student gives a memorised answer about Industrial Applications & Collision Theory Explanations 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 Industrial Applications & Collision Theory Explanations?

- [ ] 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 Industrial Applications & Collision Theory Explanations?

- [ ] 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: Key facts and terms for Industrial Applications & Collision Theory Explanations

BAND 3 2 MARKS

SUCCESS CRITERION 2

Prove that you can: Where this lesson fits in Module 5

BAND 4 3 MARKS

SUCCESS CRITERION 3

Prove that you can: How the main ideas in Industrial Applications & Collision Theory Explanations connect

BAND 5 4 MARKS

One thing I still need help with: