

Hydrocarbon Products, Use and Change Over Time

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

This lesson closes the hydrocarbons block by showing how hydrocarbon-derived products changed transport, manufacturing and daily life. It also begins the evaluation skill students need later: useful products can bring major benefits while still carrying environmental costs.

- separated crude-oil products have many practical uses
- one resource can reshape technology and society over time

2. Success Criteria

By the end, you should be able to:

- separated crude-oil products have many practical uses
- hydrocarbon-derived products changed transport, manufacturing and daily life
- usefulness can be weighed against environmental cost at an introductory level

3. Key Terms

Hydrocarbon-derived product

A useful product made from hydrocarbons or crude-oil fractions.

Technology

Practical tools, systems and processes developed to solve problems or support daily life.

Daily life

Ordinary human activities such as transport, heating, cooking, packaging and manufacturing.

Environmental cost

A negative effect on the environment linked to the production, use or disposal of a material or resource.

Usefulness

The degree to which a product serves a practical purpose effectively.

Evaluation

Making a reasoned judgement by weighing benefits and costs using evidence.

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: "separated crude-oil products have many practical uses". Use one specific example from the lesson.

CORE

2. Apply this idea to a new example: "hydrocarbon-derived products changed transport, manufacturing and daily life". Show your reasoning clearly.

CORE

3. Analyse why this idea matters for understanding Hydrocarbon Products, Use and Change Over Time: "usefulness can be weighed against environmental cost at an introductory level".

REASONING

6. Extend: Apply the Idea

A student says, "I understand Hydrocarbon Products, Use and Change Over Time because I memorised the definition."

Explain why memorising a definition is not enough. Use an example from the lesson to show deeper understanding.

7. Multiple Choice

1. What is the best first step when answering a question about Hydrocarbon Products, Use and Change Over Time?

- 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 Hydrocarbon Products, Use and Change Over Time?

- 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: separated crude-oil products have many practical uses

SUCCESS CRITERION 2

Prove that you can: hydrocarbon-derived products changed transport, manufacturing and daily life

SUCCESS CRITERION 3

Prove that you can: usefulness can be weighed against environmental cost at an introductory level

One thing I still need help with:
