CHEMISTRY YEAR 12 - MODULE 8 - LESSON 11

Drug Classification & Functional Groups

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

Ibuprofen tablets are commonly sold in 200 mg doses, while paracetamol tablets are often 500 mg. That difference is not random. In medicinal chemistry, structure influences binding, potency, solubility and the way a molecule behaves in the body.

- The main structural and functional medicine categories named in the course
- How functional groups influence polarity, solubility, reactivity and binding

2. Success Criteria

By the end, you should be able to:

- The main structural and functional medicine categories named in the course
- The key functional groups found in common drug molecules
- The meaning of the term pharmacophore

3. Key Terms

pharmacophore
the part of a molecule responsible for the key interactions that produce biological activity

relief medicines
sold in different tablet masses

That probably just
one tablet has more filler than the other

have one enantiomer that
therapeutic and one that is toxic

some have enantiomers that
both active but with different pharmacological profiles

Drug classification
not only “what illness it treats”

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 main structural and functional medicine categories named in the course". Use one specific example from the lesson.

BAND 3 2 MARKS

2. Apply this idea to a new example: "The key functional groups found in common drug molecules". Show your reasoning clearly.

BAND 4 3 MARKS

3. Analyse why this idea matters for understanding Drug Classification & Functional Groups: "The meaning of the term pharmacophore".

BAND 5 4 MARKS

6. Extend: Apply the Idea

BAND 5/6 5 MARKS

A student gives a memorised answer about Drug Classification & Functional Groups 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 Drug Classification & Functional Groups?

☐ 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 Drug Classification & Functional Groups?

☐ 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 main structural and functional medicine categories named in the course

BAND 3 2 MARKS

SUCCESS CRITERION 2

Prove that you can: The key functional groups found in common drug molecules

BAND 4 3 MARKS

SUCCESS CRITERION 3

Prove that you can: The meaning of the term pharmacophore

BAND 5 4 MARKS

One thing I still need help with: