

Molar Mass

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

Every tablet your pharmacist counts, every dose in an IV bag, every gram of fertiliser spread across a paddock — all calculated using molar mass. It's the single most-used formula in practical chemistry, and it lives on the periodic table you already have.

- What molar mass is and its units (g mol^{-1})
- Why molar mass equals relative atomic/molecular mass in g mol^{-1}

2. Success Criteria

By the end, you should be able to:

- What molar mass is and its units (g mol^{-1})
- Where to read molar mass from the periodic table
- The formula $n = m \div \text{MM}$

3. Key Terms

Mole

The SI unit for amount of substance; contains exactly 6.022×10^{23} particles.

Avogadro's Number

6.022×10^{23} — the number of particles in one mole of a substance.

Molar Mass

The mass of one mole of a substance, measured in g/mol .

Limiting Reagent

The reactant that is completely consumed first, limiting the amount of product formed.

Empirical Formula

The simplest whole-number ratio of atoms in a compound.

Molecular Formula

The actual number of atoms of each element in a molecule of a compound.

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: "What molar mass is and its units (g mol^{-1})". Use one specific example from the lesson.

BAND 3 **2 MARKS**

2. Apply this idea to a new example: "Where to read molar mass from the periodic table". Show your reasoning clearly.

BAND 4 **3 MARKS**

3. Analyse why this idea matters for understanding Molar Mass: "The formula $n = m \div \text{MM}$ ".

BAND 5 **4 MARKS**

6. Extend: Apply the Idea

BAND 5/6

5 MARKS

A student gives a memorised answer about Molar Mass 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 Molar Mass?

- 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 Molar Mass?

- 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: What molar mass is and its units (g mol^{-1})

BAND 3 **2 MARKS**

SUCCESS CRITERION 2

Prove that you can: Where to read molar mass from the periodic table

BAND 4 **3 MARKS**

SUCCESS CRITERION 3

Prove that you can: The formula $n = m \div \text{MM}$

BAND 5 **4 MARKS**

One thing I still need help with:
