Sub-strand 1.2. Fundamental Tools of Chemistry

Achievement Indicator:

• List and describe the names, correct uses and care in handling some basic apparatus.

Question:

Copy and complete the following table by drawing the named apparatus and writing down its use.

Name	Draw Diagram	Write down the Use
Beaker		
Volumetric Flask		
Burette		
Measuring cylinder		
Thermometer		

Sub-strand 1.2. Fundamental Tools of Chemistry

Achievement Indicator:

Outline and talk about the importance of safety rules in the laboratory for handling and storing chemicals as well as the cleaning of equipment after use.

Question:

Laboratory safety rules need to be strictly followed. For the following laboratory safety rules, state why it has to be followed.

(i)	Do not enter the laboratory until asked by the teacher.
(ii)	Eating or drinking is not permitted in the laboratory.
(iii)	Students must never play while working in the laboratory.

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Achievement Indicator:

Outline and talk about the importance of safety rules in the laboratory for handling and storing chemicals as well as the cleaning of equipment after use.

Question:

Laboratory safety rules need to be strictly followed. For the following laboratory safety rules, state why it has to be followed.

(iv)	Rinsing all glassware well before use.
(v)	Always wear proper safety protection gears such as goggles, gloves, closed shoes, lab coats and nose masks when conducting hazardous experiment.
(vi)	Keep flammable substances away from flame.

Sub-strand 1.2. Fundamental Tools of Chemistry

Achievement Indicator:

Determine and write the correct units for measurements from the apparatus and use them in calculations with correct significant figures.

Question:

Complete the following table by correctly filling in the symbol, unit and abbreviated form of unit for the quantities below.

Quantity	Symbol	Name of Unit	Abbreviated form of unit
Length			
Mass			
Time			
Temperature			
Volume			
Pressure			
Area			
Concentration			

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Achievement Indicator:

Determine and write the correct units for measurements from the apparatus and use them in calculations with correct significant figures.

- 1. Calculate the answers to the appropriate number of significant figures.
 - a. 32.567 + 135.0 + 1.4567
 - b. 378 67
 - c. 23.7×3.8
 - d. 28.367 ÷ 3.74 2.
- 2. Circle the letter of the best answer to the problem:

123000 m × 3234 m

- A. $3.97 \times 10-7 \text{ m}2$
- B. 398 m2
- C. 39800000 m2
- D. $3.98 \times 108 \text{ m}2$
- 3. When performing the calculation 44.540 g + 11.1 g + 1722.84 g, the final answer must have
- A. one decimal place.

- B. the units of g3.
- C. three significant figures.
- D. two decimal places.