

## Lab Skills & Chemistry

### Station 1: Lab Equipment

1. Using the equipment provided on the table, match the equipment with the names below. Write a description of what it is used for.

Name	Description
H Beaker	Used for measuring approximate volumes of liquids (accurate to $\pm 10$ mL)
F Hot plate	Used for heating solutions
B Erlenmeyer flask	Used for storing liquids. The shape helps prevent losses due to splashing
D Bunsen burner	Produces a single open flame for heating
I Eyedropper	Used for suctioning up small amounts of liquids
M Graduated cylinder	Used for measuring volumes of liquids (accurate to $\pm 0.5$ mL)
E Funnel	Used for transferring liquids from one container to another
N Scoopula	Used for scooping dry chemicals
K Weigh boat	Used for weighing dry chemicals
C Thermometer	Used for measuring temperatures of liquids
P Striker	Used for lighting a Bunsen burner
J Test tube holder	Used to hold test tubes
G Digital Scale	Used for measuring mass
A Safety glasses	Used to protect your eyes from chemicals
O Test tube brush	Used for cleaning test tubes and other glassware
L Test tube	Used for holding small amounts of liquids

## Station 2: Making Observations

Define and give an example for each of the following:

- Qualitative observation: Qualitative observations describe the quality of something (uses 5 senses)
  - Example: Texture, colour, smell, etc.
- Quantitative observation: Quantitative observations describe the quantity of something (includes a number/measurement)
  - Example: Weight, mass, volume, etc.
  - Instruments we can use: Scale (for mass), Graduated cylinder (for volume), Ruler (for length), etc.

Identify the following as a qualitative or quantitative observation:

- 5 cm high Quantitative
- Moves 5 km/hr Quantitative
- Colourless Qualitative
- Green and blue Qualitative
- Feels slippery Qualitative
- Tastes salty Qualitative

At the table there are three objects. Make 2 qualitative observations and 2 quantitative observations for each of the objects. Complete the chart.

OBJECT	Qualitative observation	Quantitative observation
<b>A</b> <b>Water</b>	1. Is colourless  2. Is liquid	1. 150 mL  2. 17-18 degrees
<b>B</b> <b>Rock</b>	1. Is solid  2. Has a rough texture	1. ~26.00 – 37.00 g  2. 3 cm x 2 cm
<b>C</b> <b>Metal rod</b>	1. Has a smooth texture  2. Is shiny	1. ~8.00-9.00g  2. 12.5 cm x 1.5 cm

# Station 3: Models

Complete the chart below using the pre-built models at the tables.

White - Hydrogen

Black - Carbon

Blue - Nitrogen

Green - Fluorine

Name	Formula	Bohr Diagram	Ionic or Covalent
Carbon tetrahydride	CH <sub>4</sub>		Covalent
Nitrogen trifluoride	NF <sub>3</sub>		Covalent
Sodium chloride	NaCl		Ionic
Potassium Oxide	K <sub>2</sub> O		Ionic