

# INTRODUCTION

- Group I elements are known as Alkali Metals.
- They include: Lithium (Li), Sodium (Na), Potassium (K), Rubidium (Rb), Caesium (Cs), Francium (Fr).
- Highly reactive metals with one electron in their outer shell.

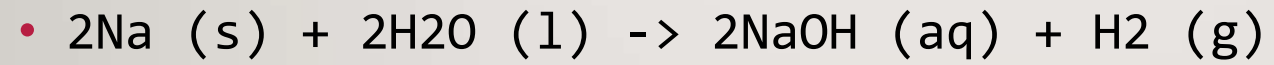
# PHYSICAL PROPERTIES

- Soft metals that can be cut with a knife
- Shiny when freshly cut but tarnish quickly in air
- Good conductors of heat and electricity
- Low melting and boiling points compared to other metals
- Density increases down the group (except sodium is less dense than potassium)

# CHEMICAL PROPERTIES

- React vigorously with water to form alkaline solution + hydrogen gas
- Form ionic compounds with halogens
- React with oxygen to form oxides, peroxides, or superoxides

# EXAMPLE REACTION



# TRENDS DOWN THE GROUP

- Reactivity increases down the group
- Melting and boiling points decrease
- Atomic radius increases
- Ionisation energy decreases

# CONCLUSION

- Group I Alkali Metals are highly reactive due to their single valence electron.
- Their reactivity and physical properties follow clear periodic trends, making them important for understanding periodicity in chemistry.