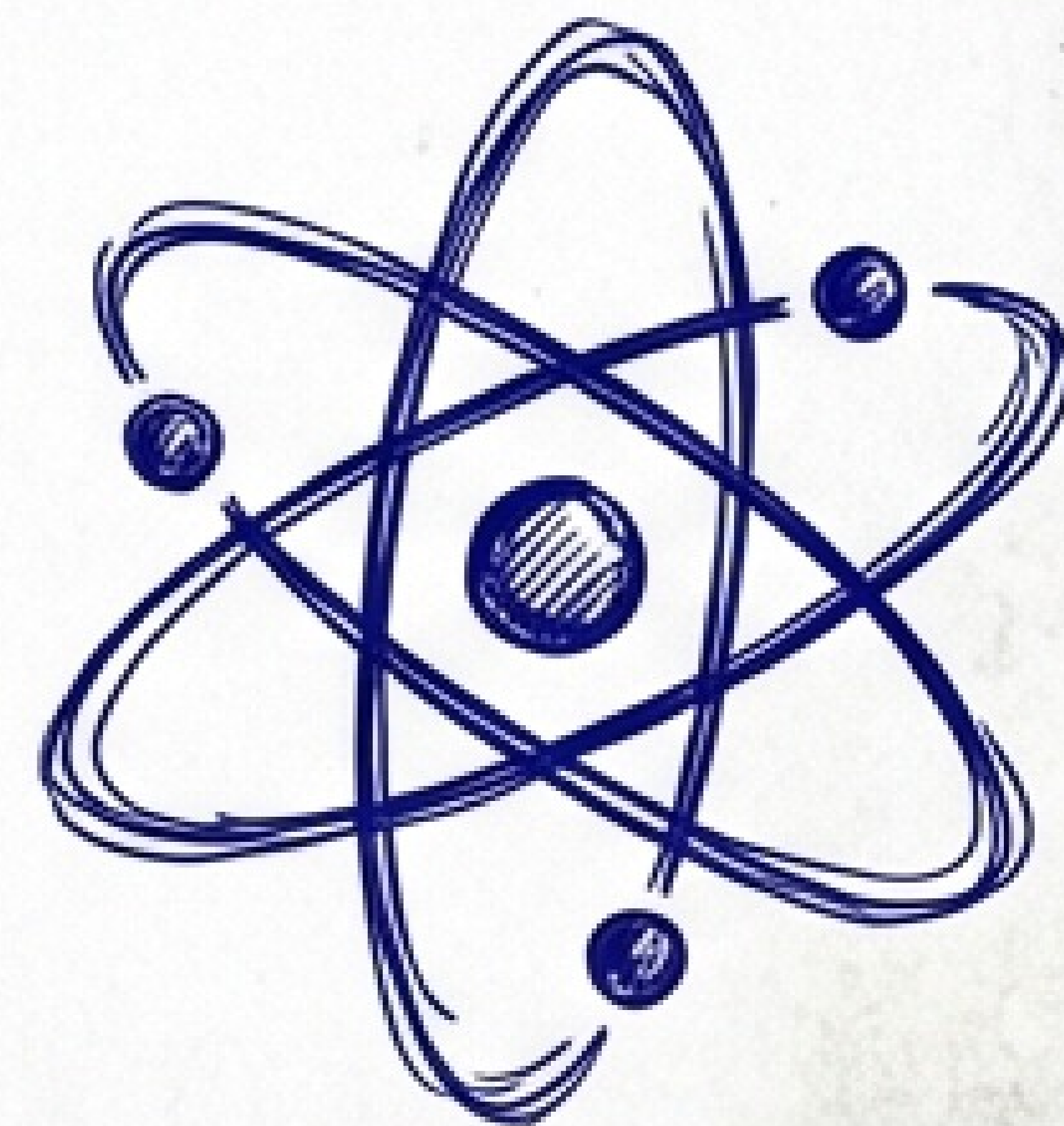




Chemistry Revision

Topic: Metals & Non-Metals



Elements



Metals

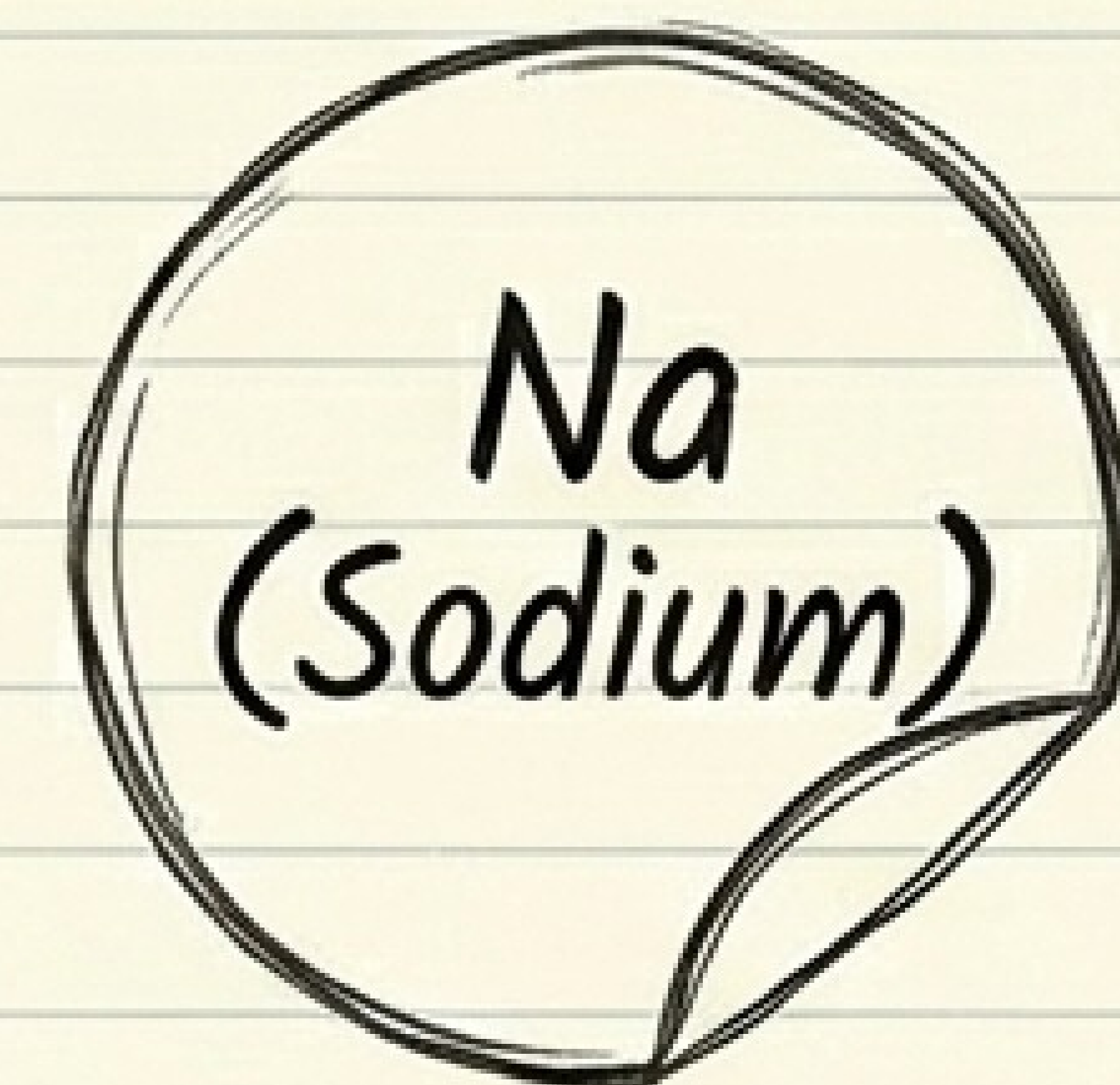
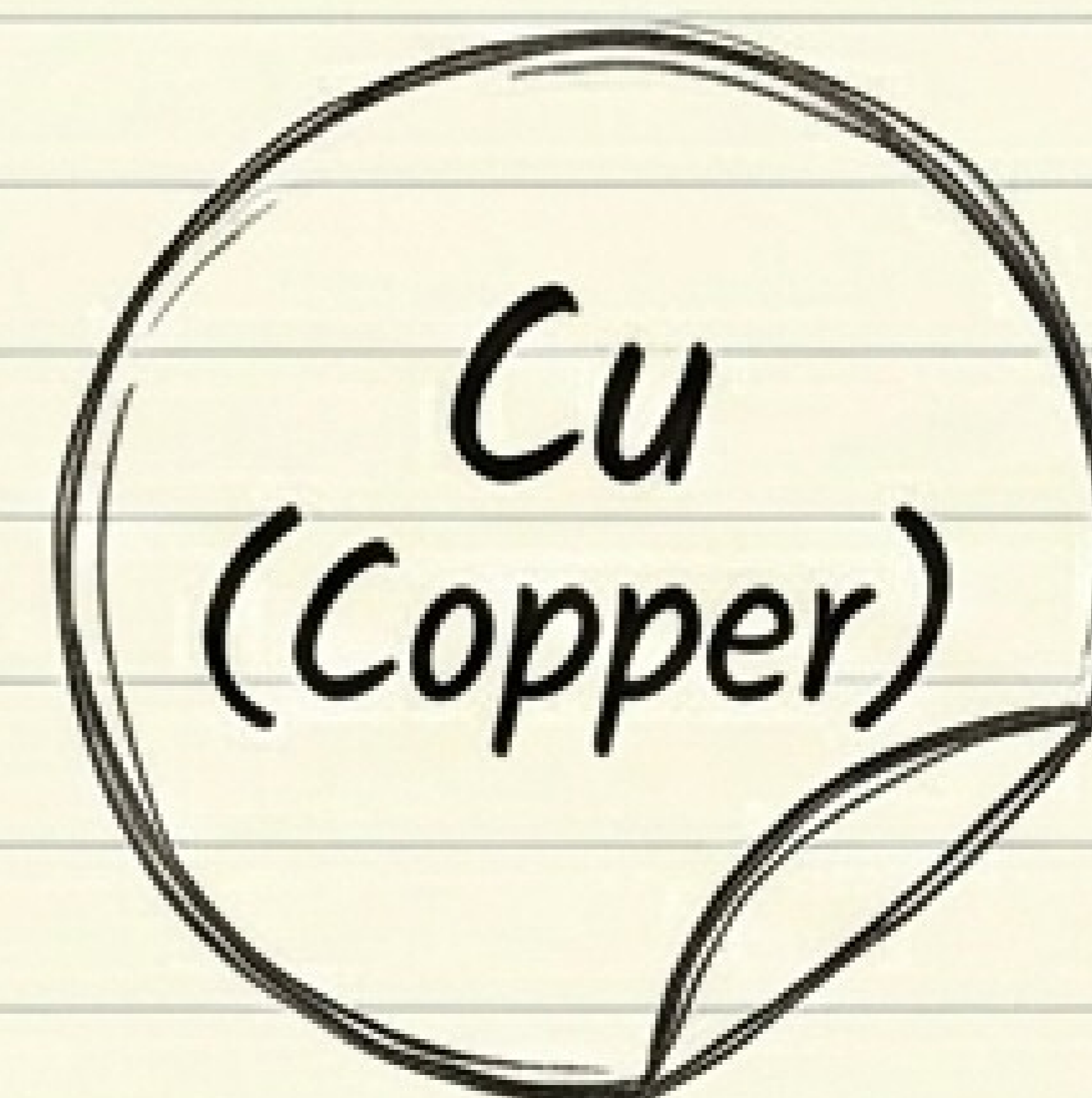
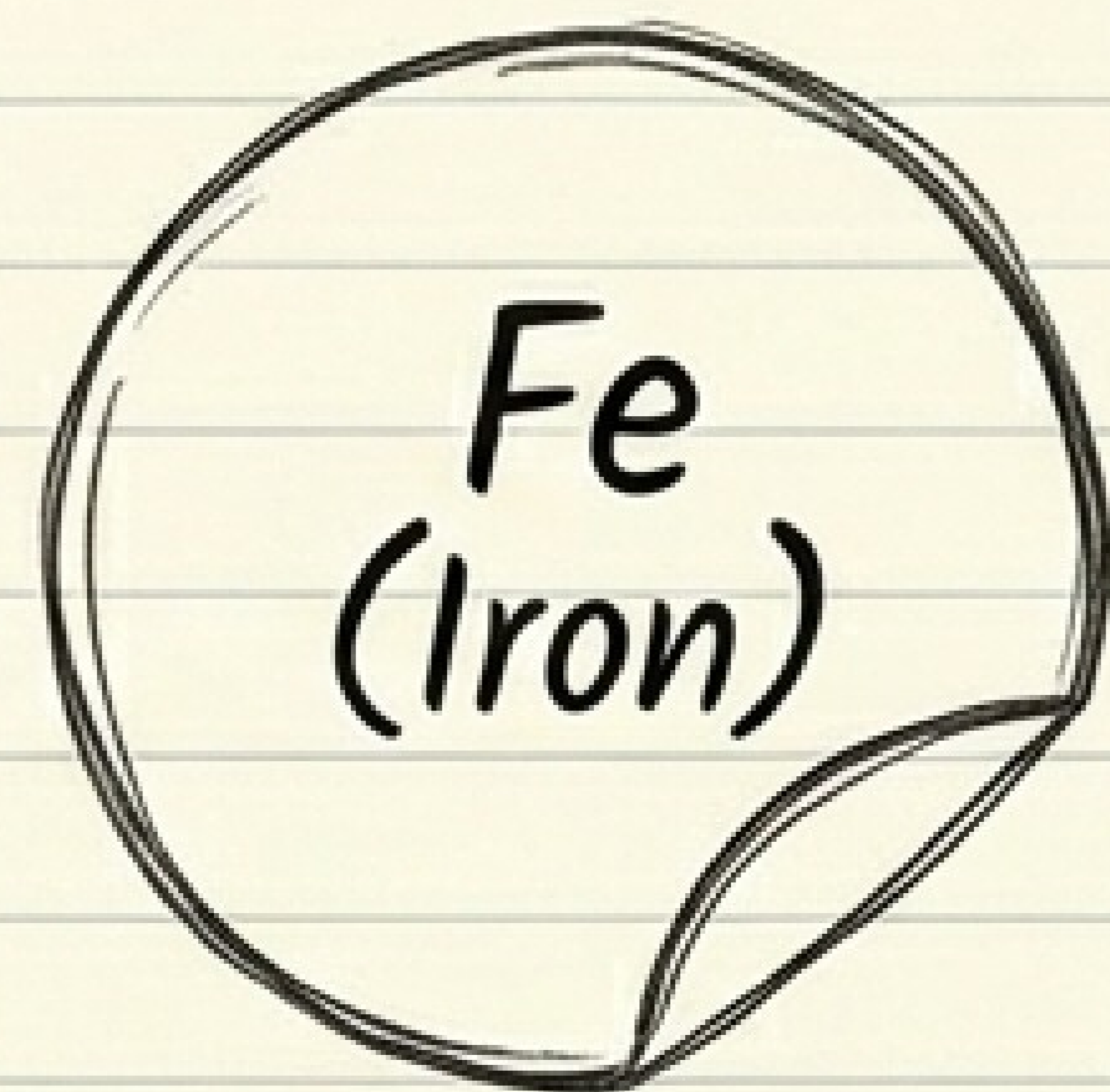
Non-Metals

Top Tip!
Metals lose electrons (+) to form positive ions.

Non-metals gain electrons (-) to form negative ions.

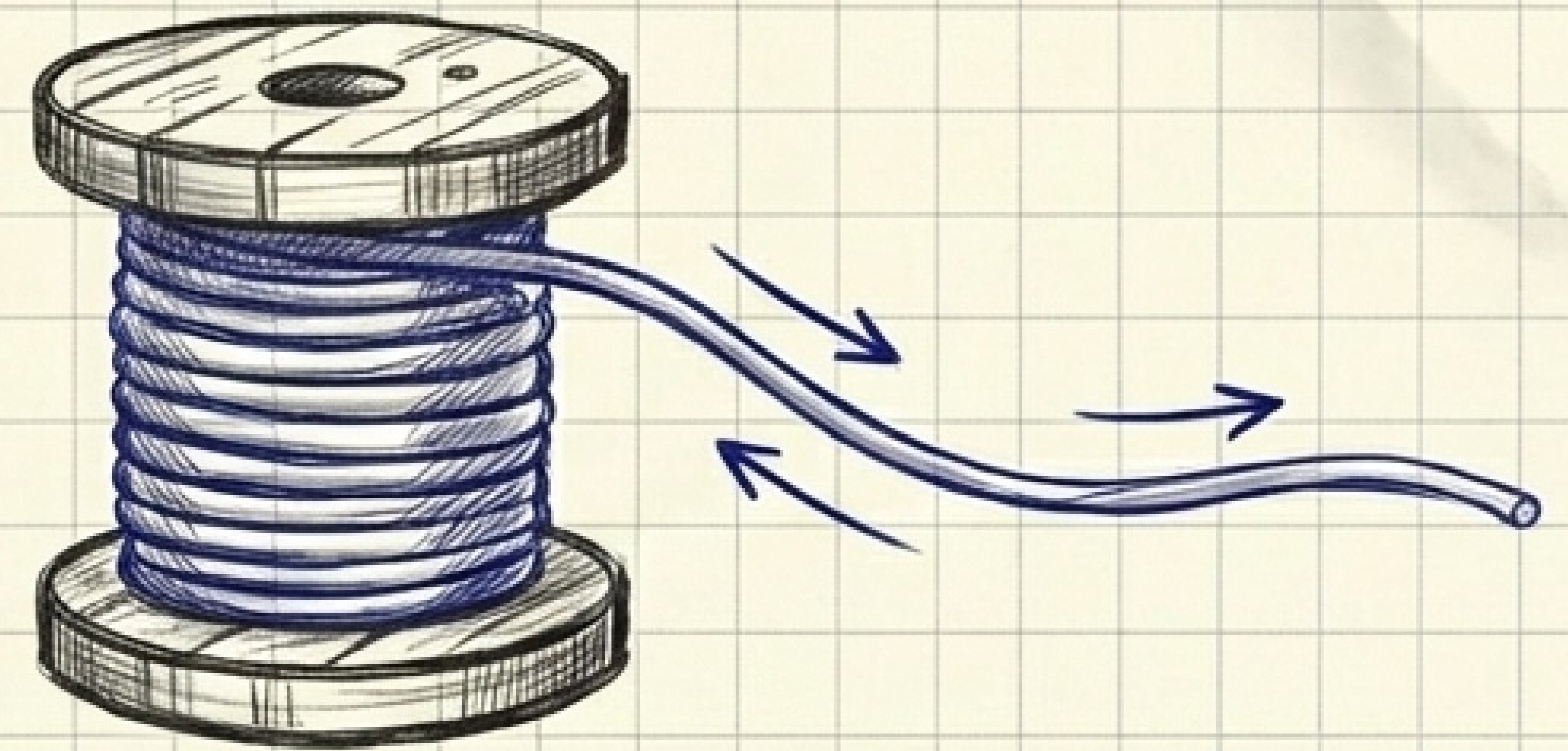
Spotlight on Metals

- Generally hard & shiny.
- Lose electrons to form positive ions.

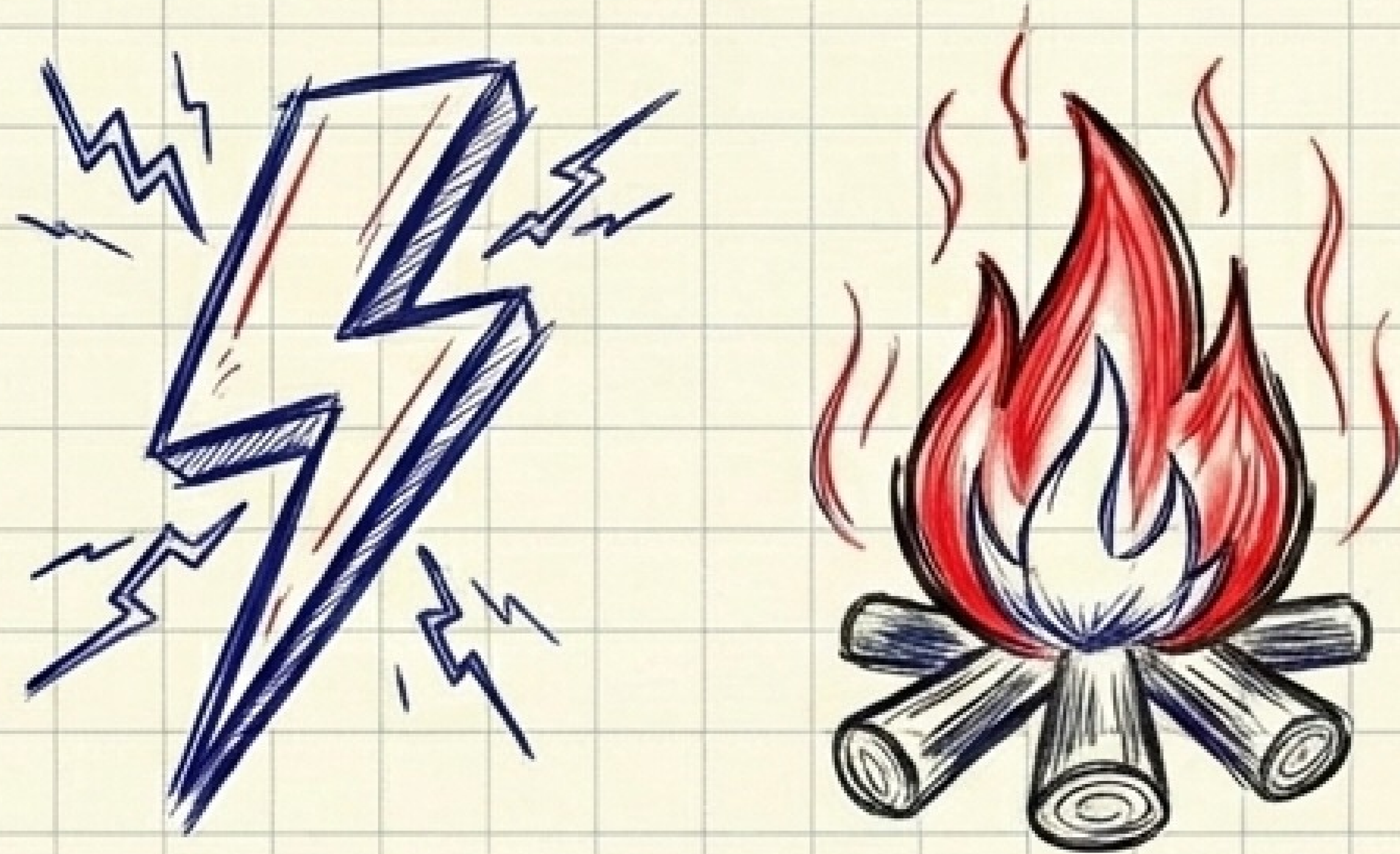




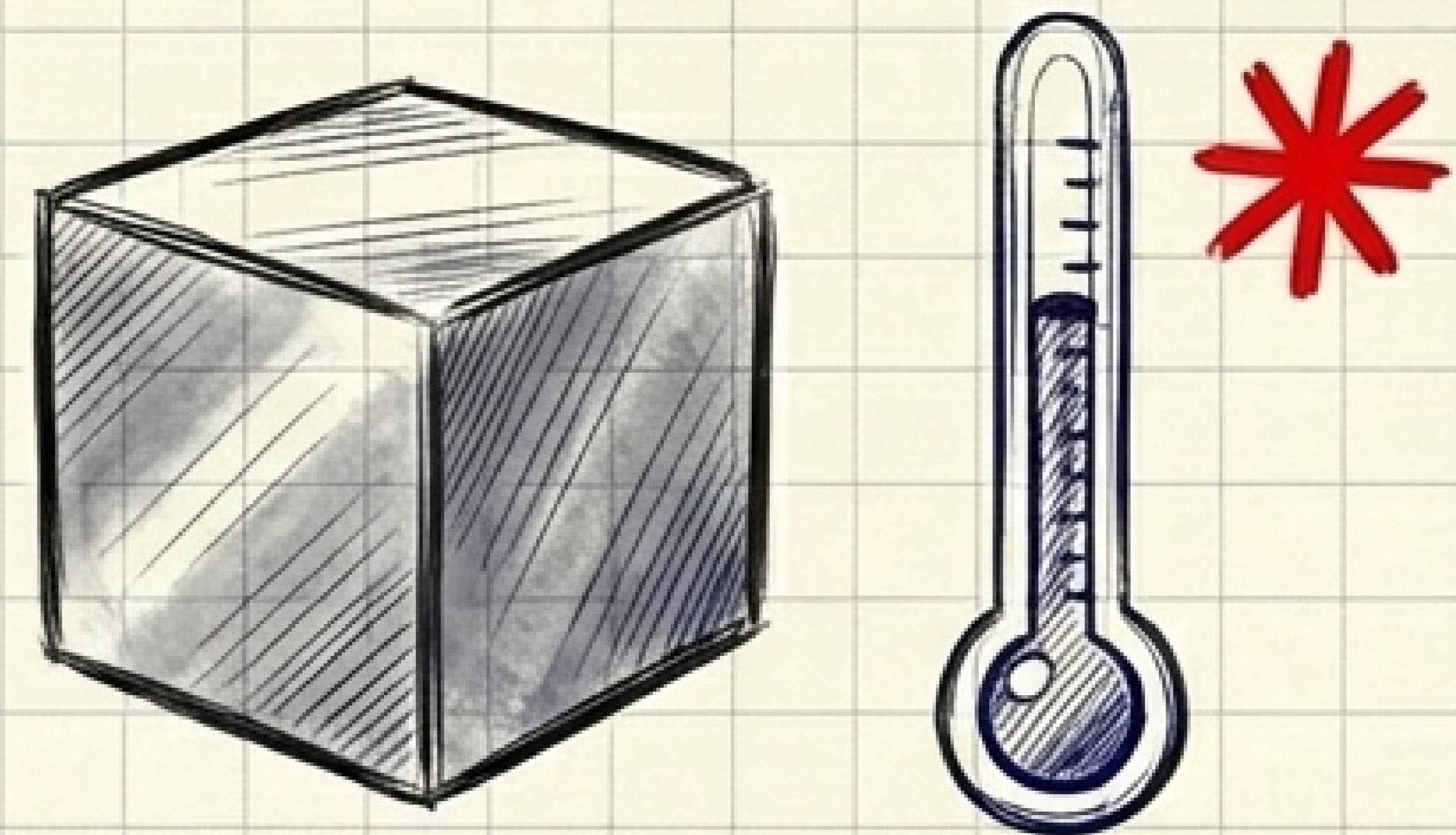
Malleable (can be hammered into sheets)



Ductile (can be drawn into wires)



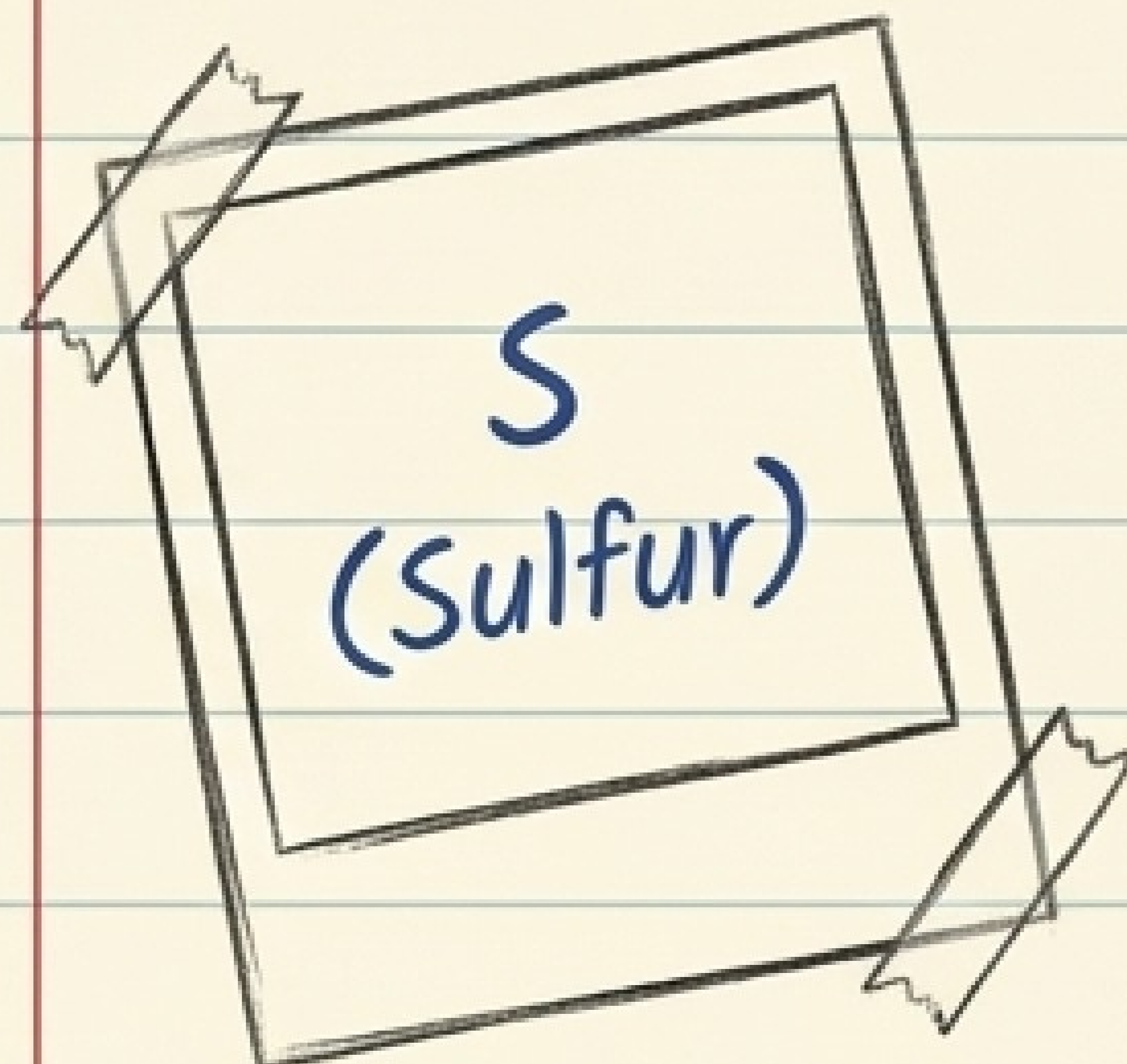
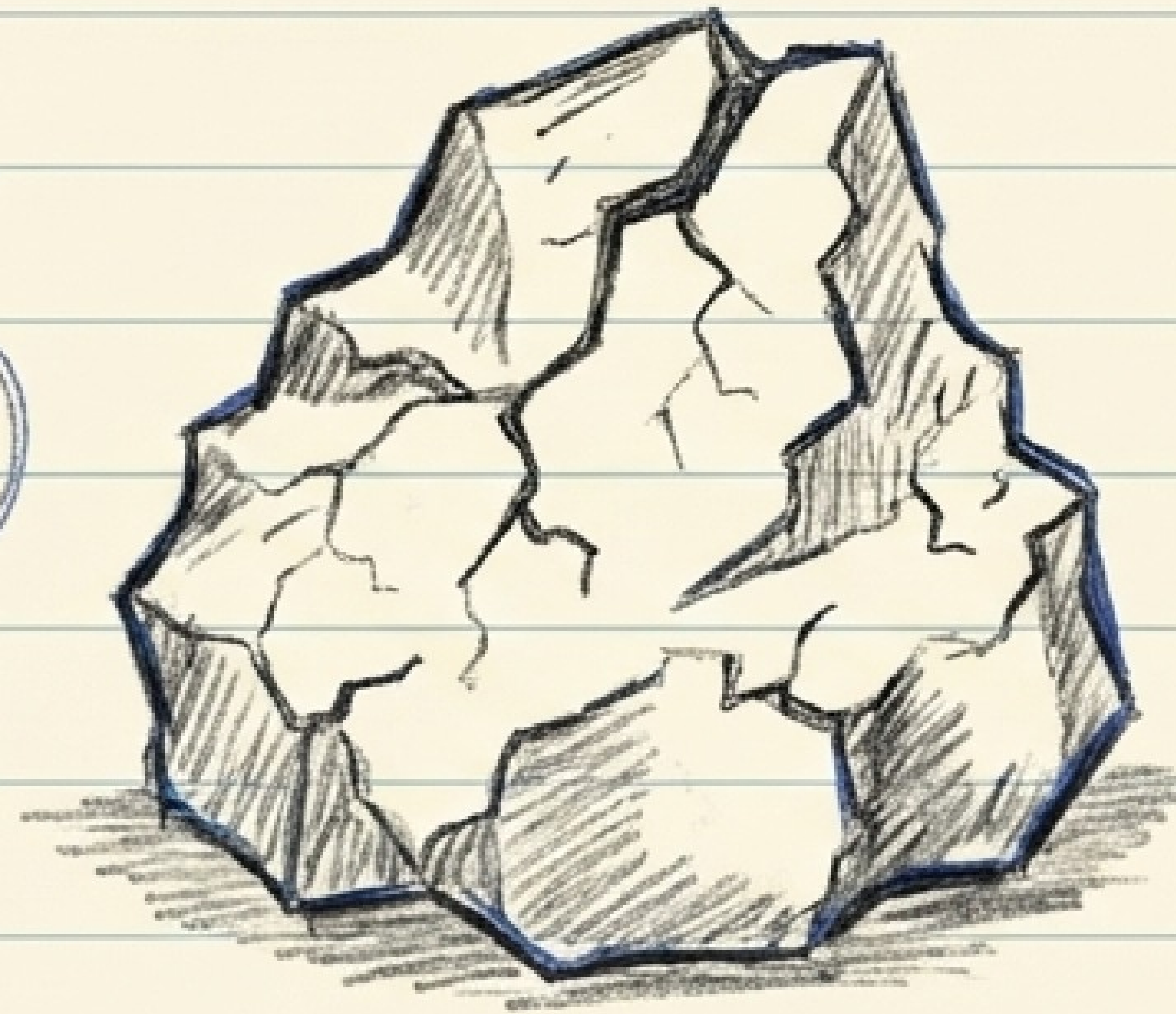
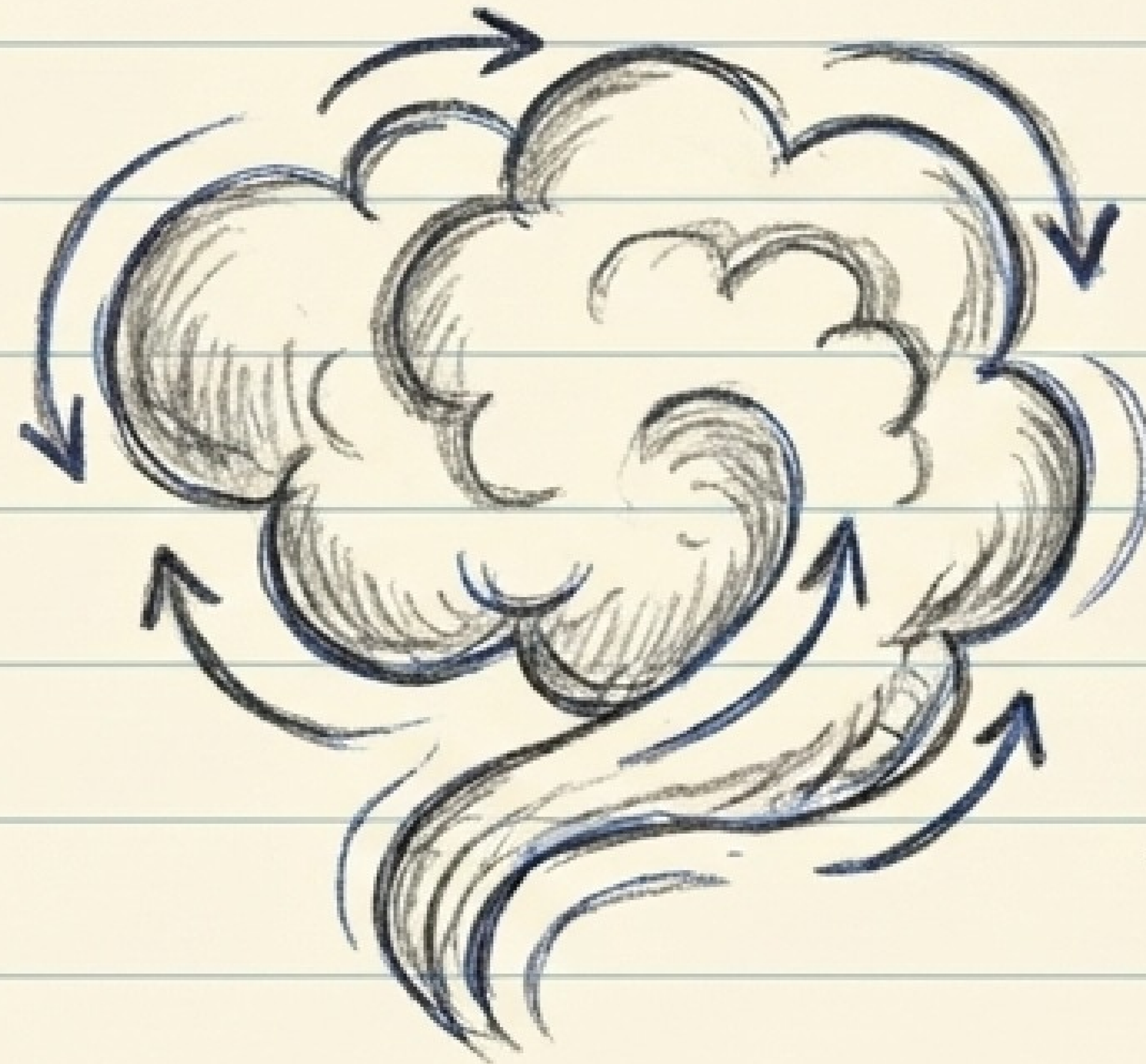
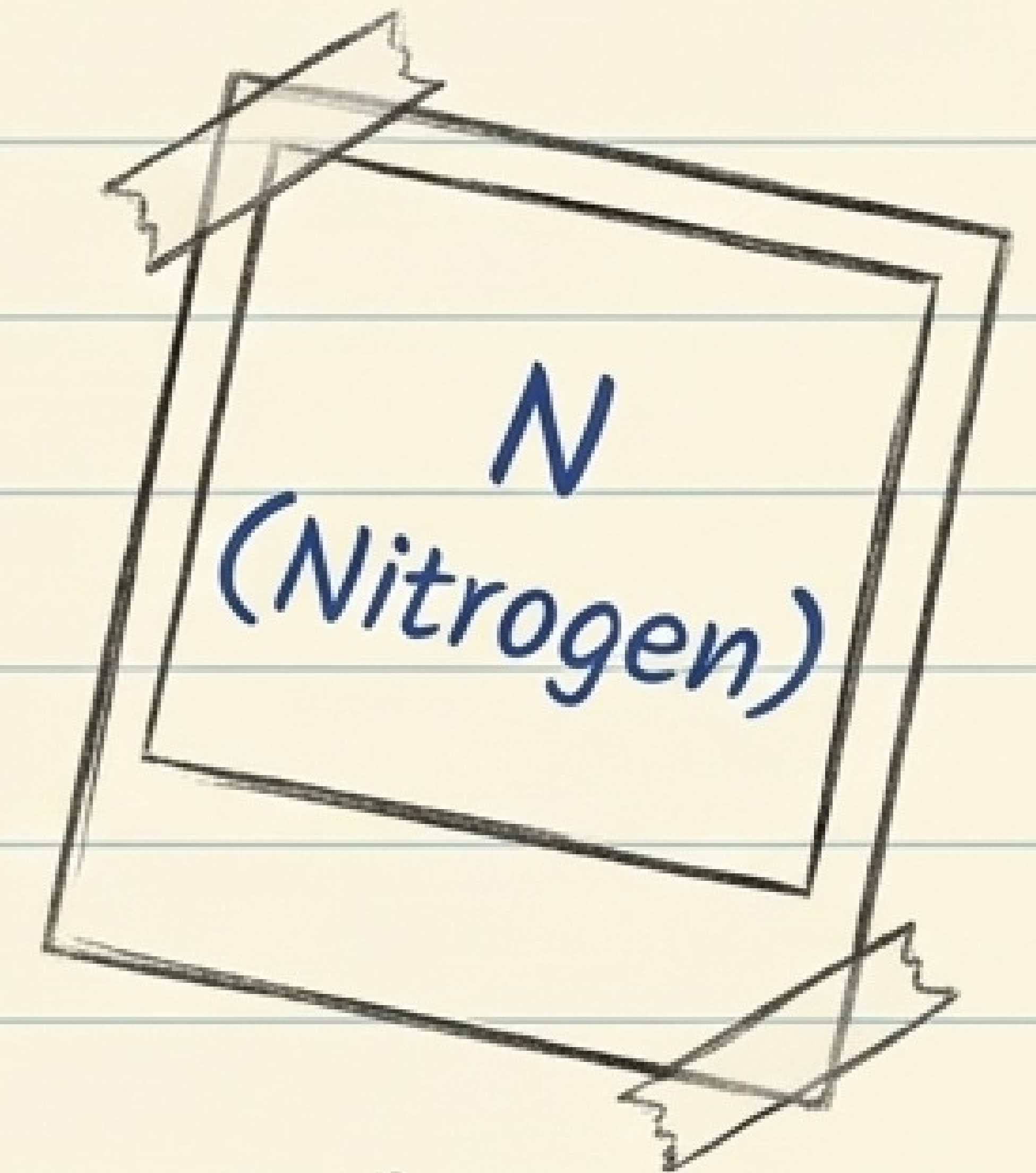
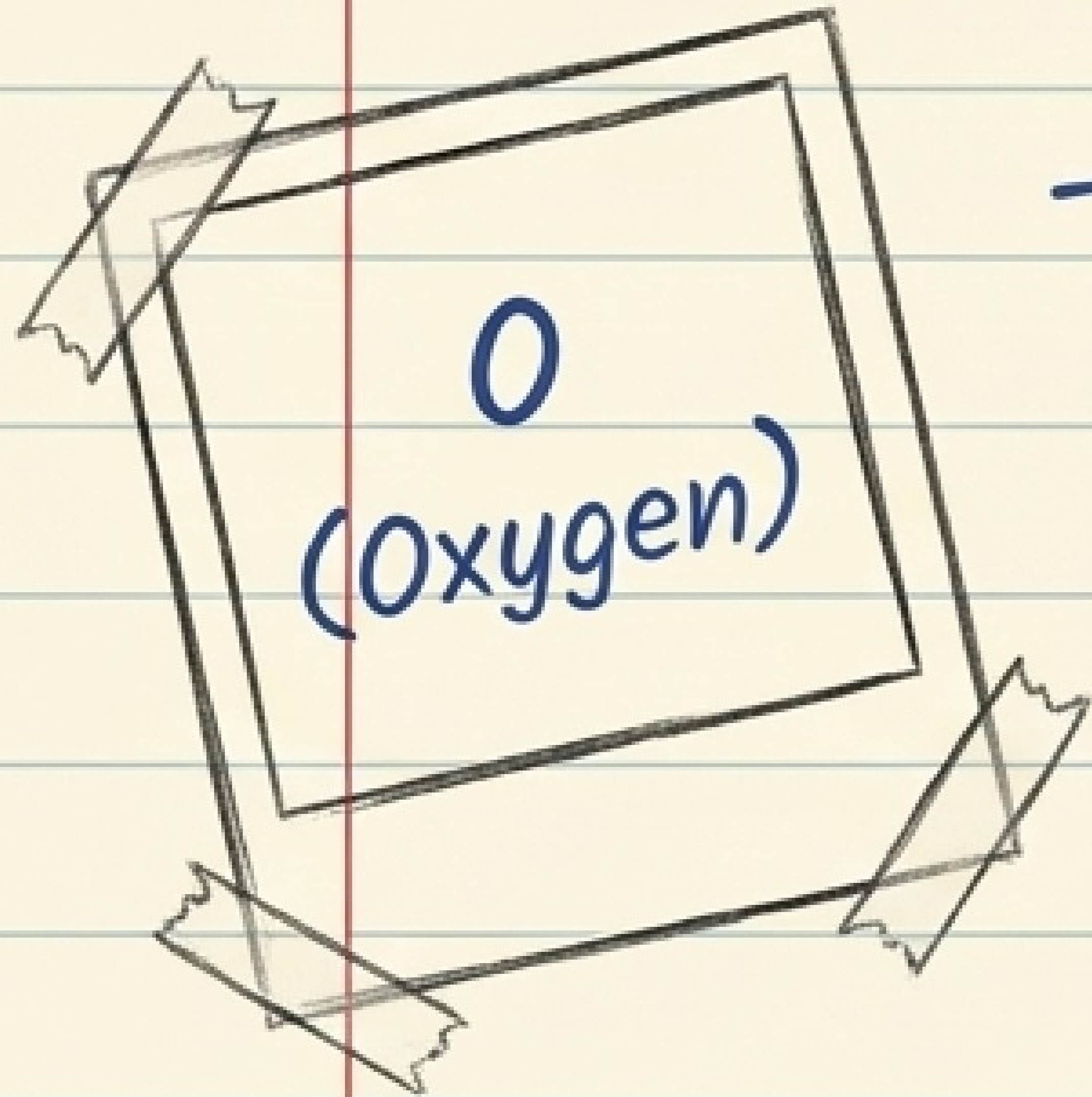
Good conductors of heat & electricity



Usually solid at room temp.
***Exception: Mercury!**

Spotlight on Non-Metals

- Usually gain electrons during chemical reactions.

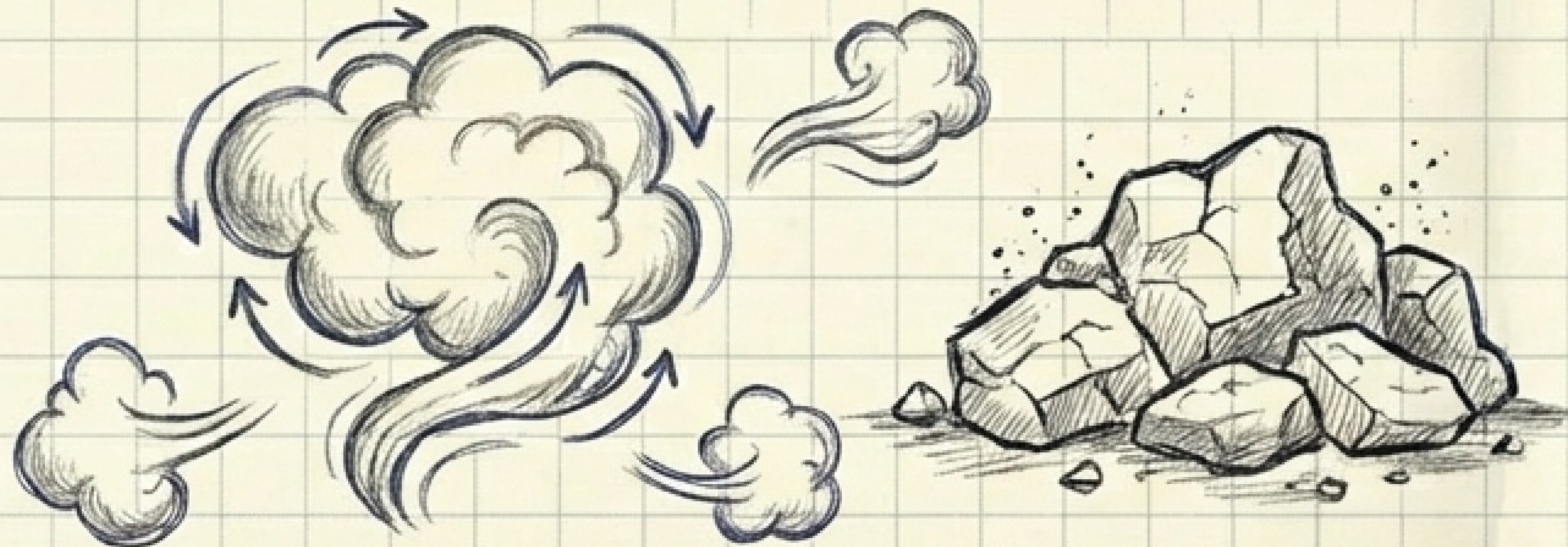




Poor conductors of
heat & electricity




Brittle (Not malleable
or ductile)





Many exist as gases
or brittle solids



Reactive Metals

- Easily lose electrons.
- React vigorously with water or oxygen! 
- Examples: Sodium (Na), Potassium (K).

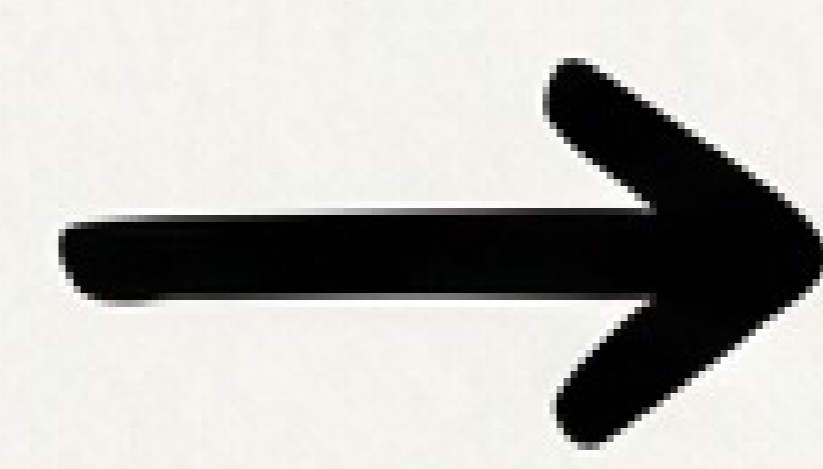
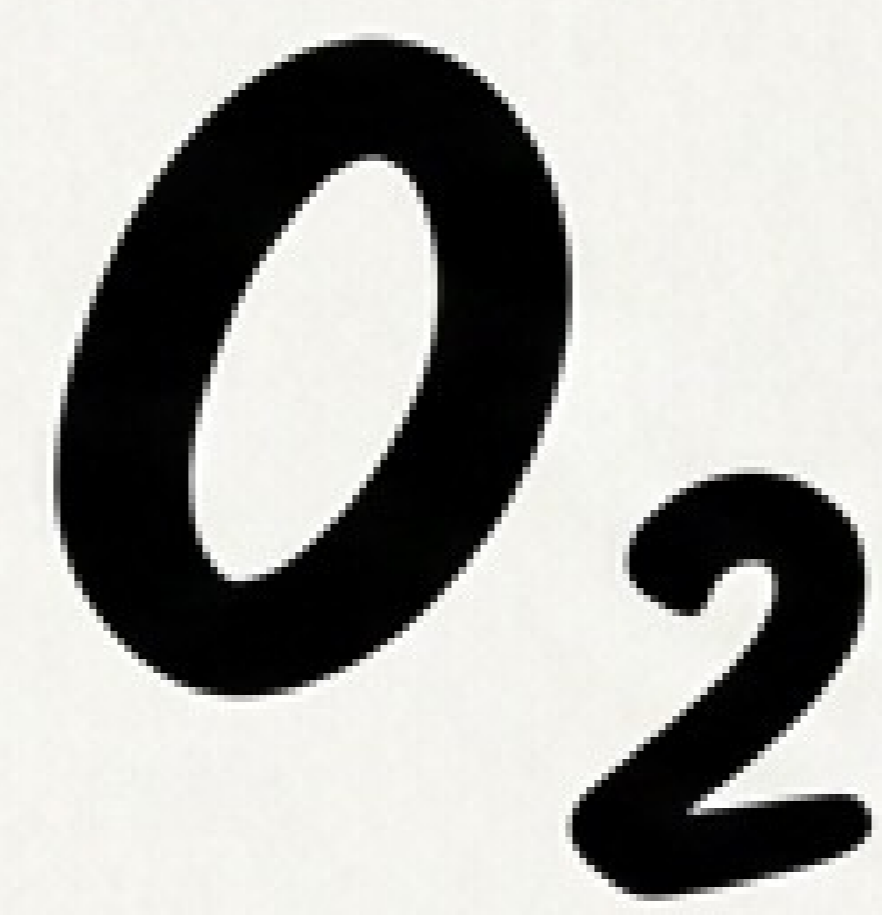
Reactive Non-Metals

- Easily gain electrons. 
- Examples: Chlorine (Cl), Fluorine (F). 

Metal



+



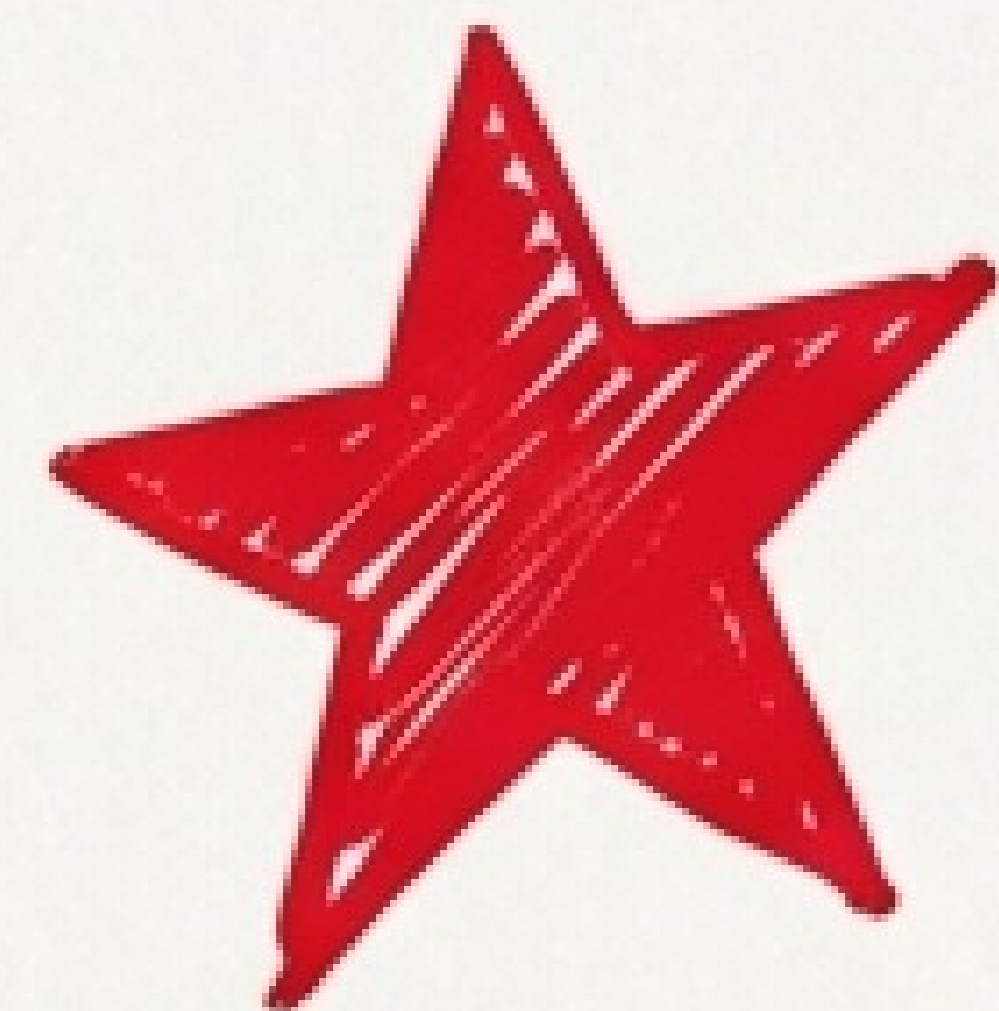
Oxygen



Metal

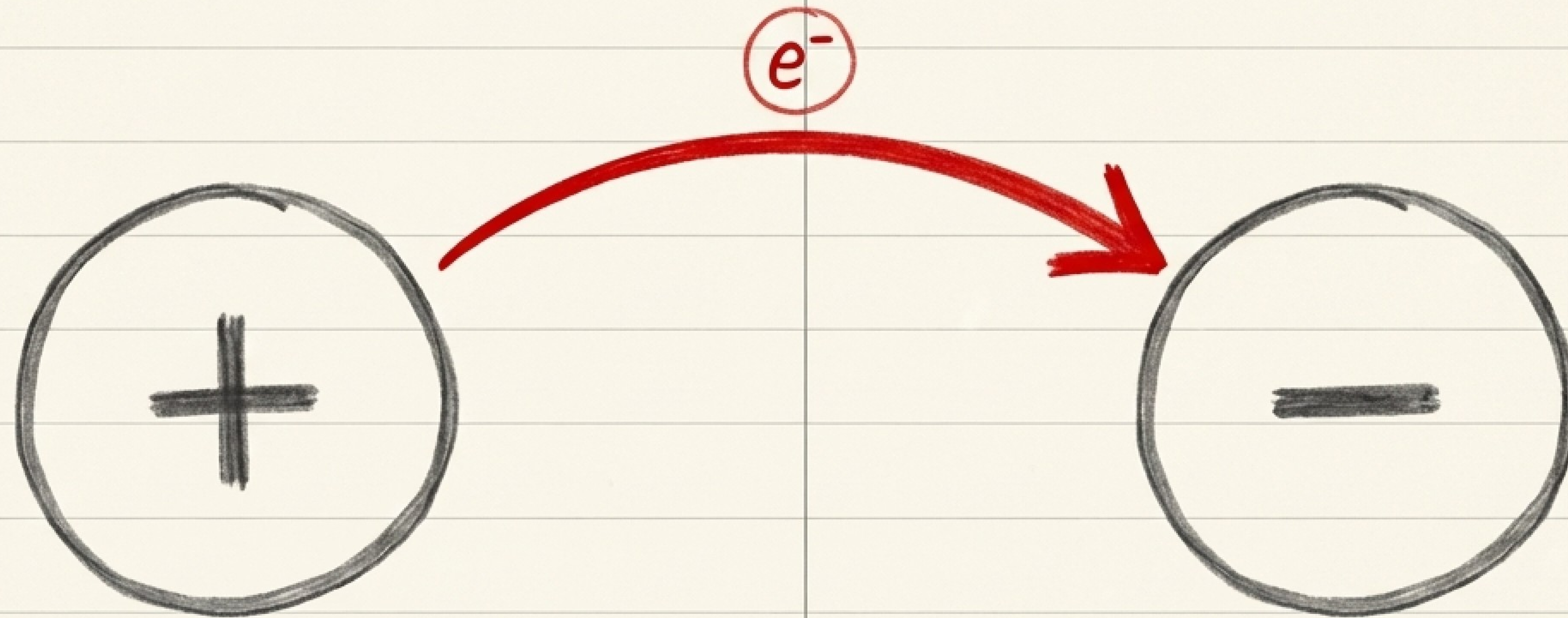


Metal Oxide
(Magnesium oxide)

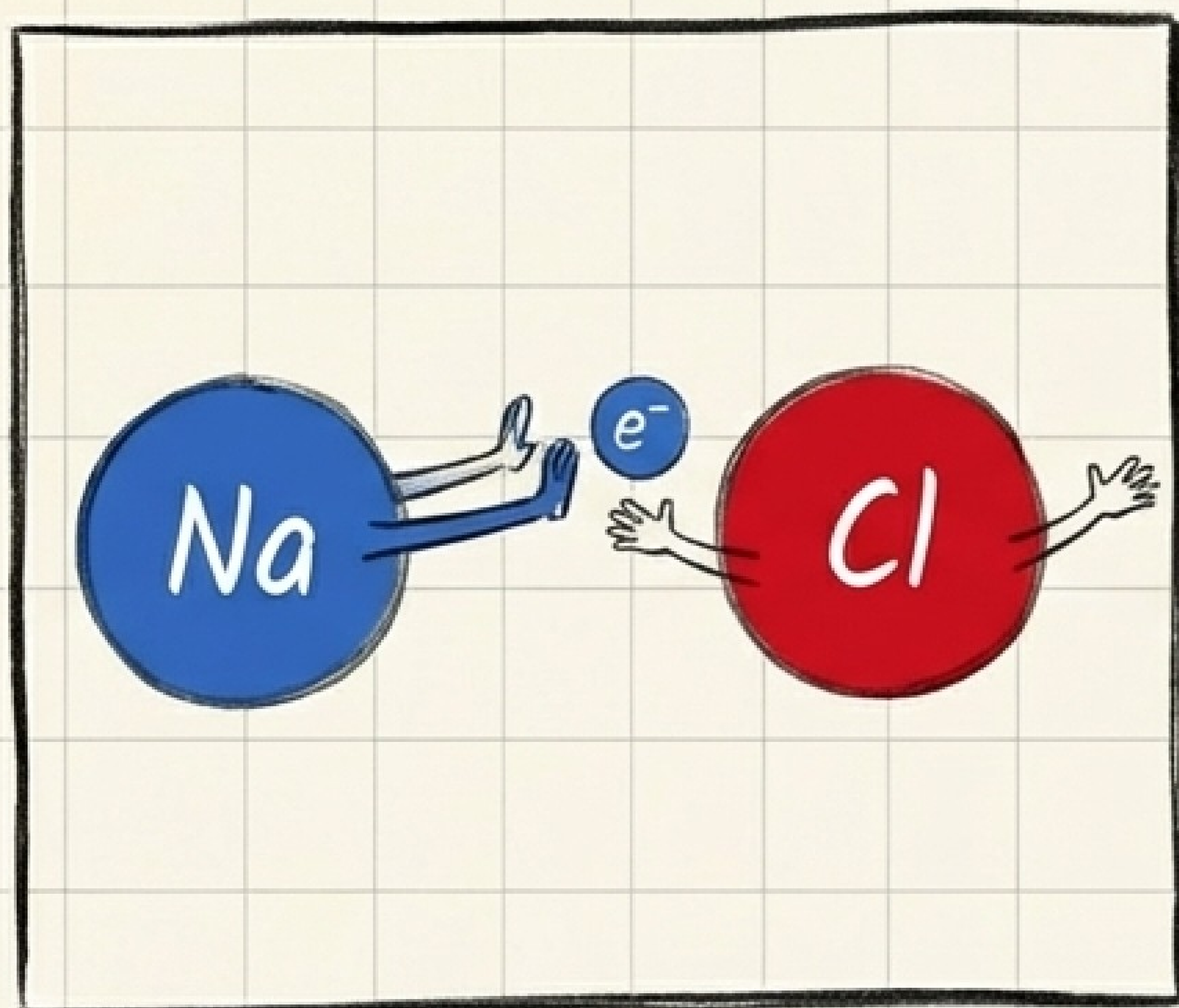


Most metal oxides are basic in nature. Magnesium oxide reacts with acids to form salt and water.

The Ionic Bond (Metal + Non-Metal)

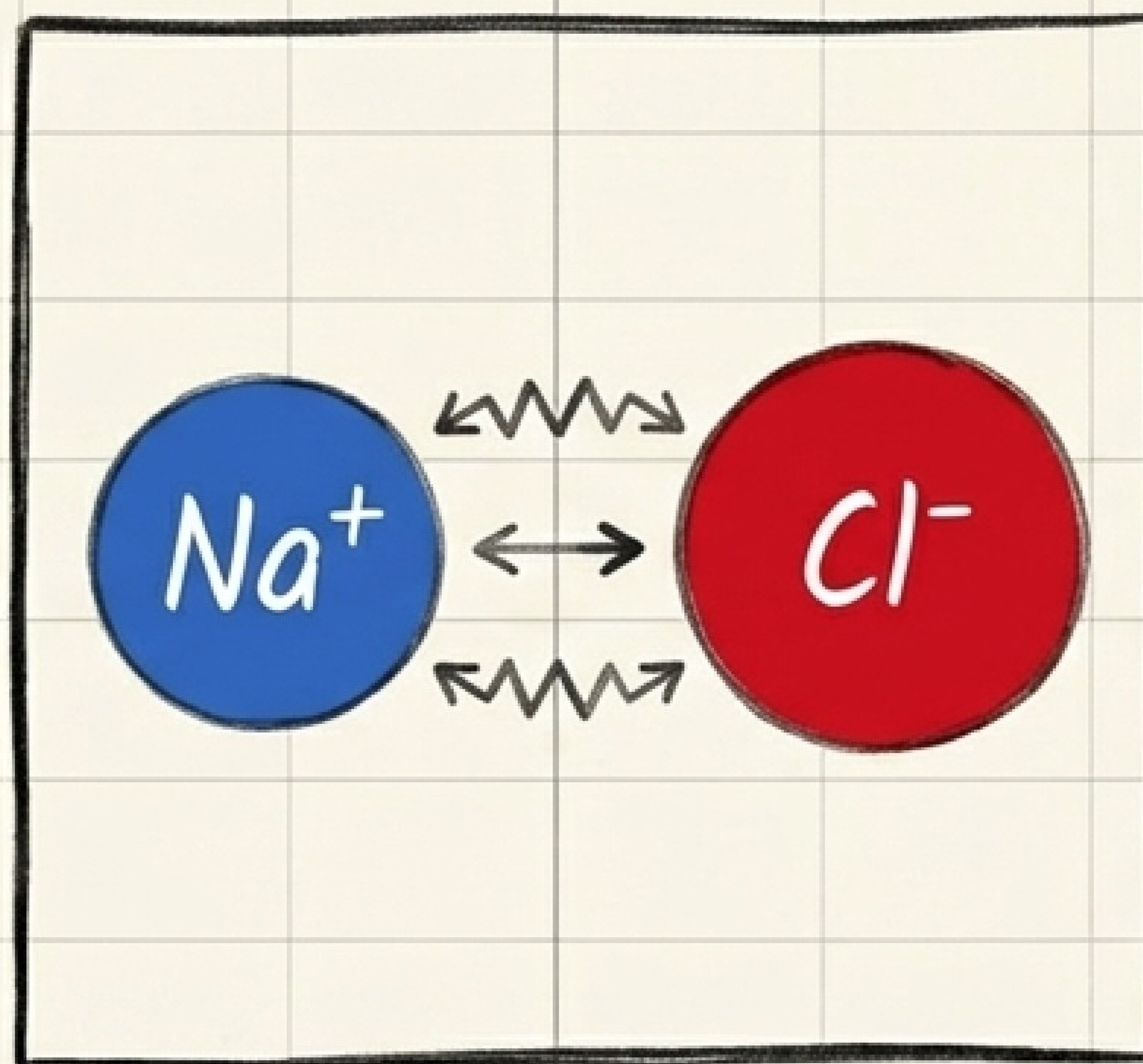


- Formed when a metal transfers electrons to a non-metal.
- The metal becomes a positively charged ion \rightarrow Cation (+)
- The non-metal becomes a negatively charged ion \rightarrow Anion (-)

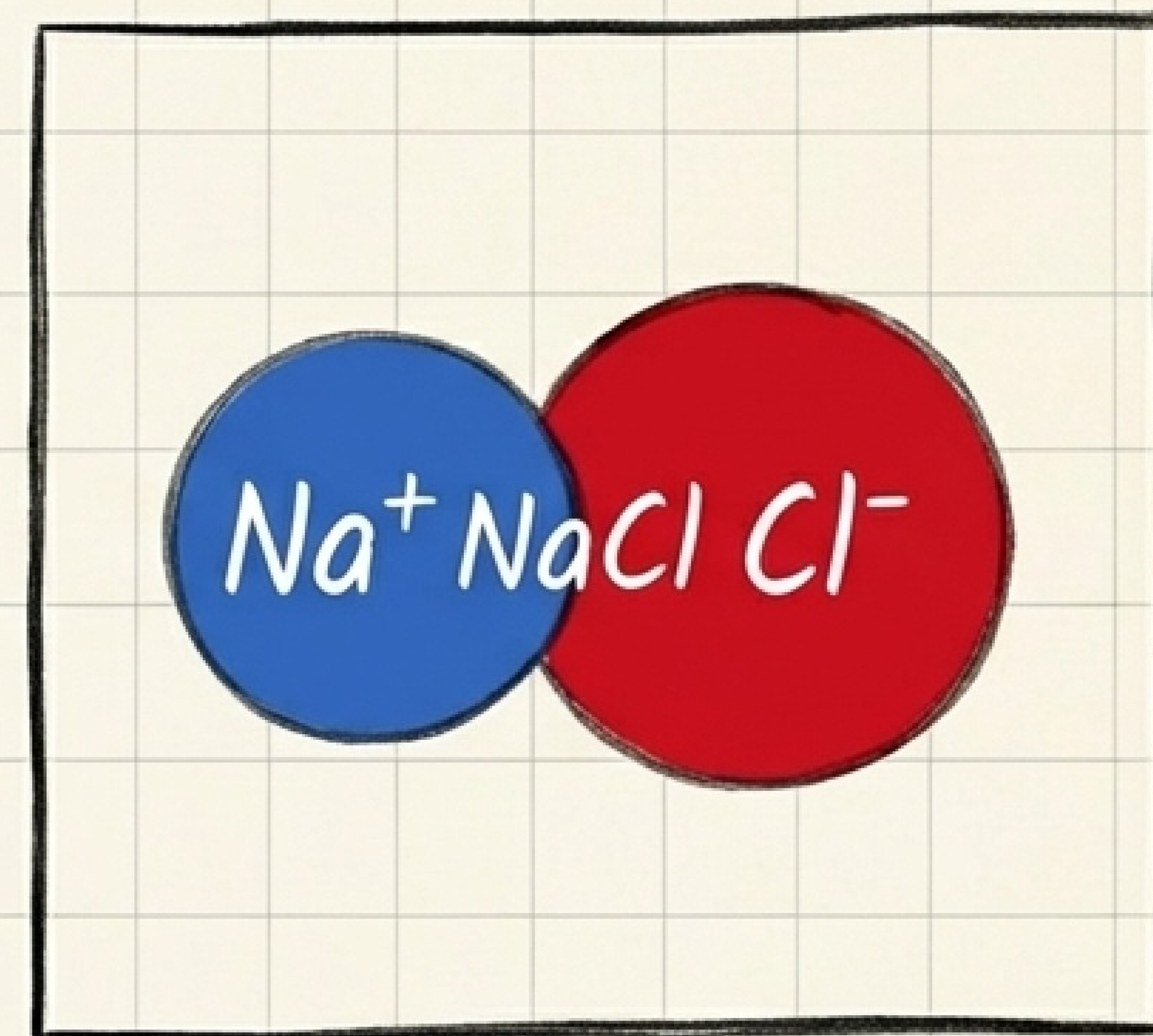


Sodium loses 1 electron
($\text{Na} \rightarrow \text{Na}^+ + e^-$).

Chlorine gains 1 electron
($\text{Cl} + e^- \rightarrow \text{Cl}^-$).



Opposite charges
attract each
other.



An ionic bond is
formed!
Example:
Sodium chloride
(NaCl).

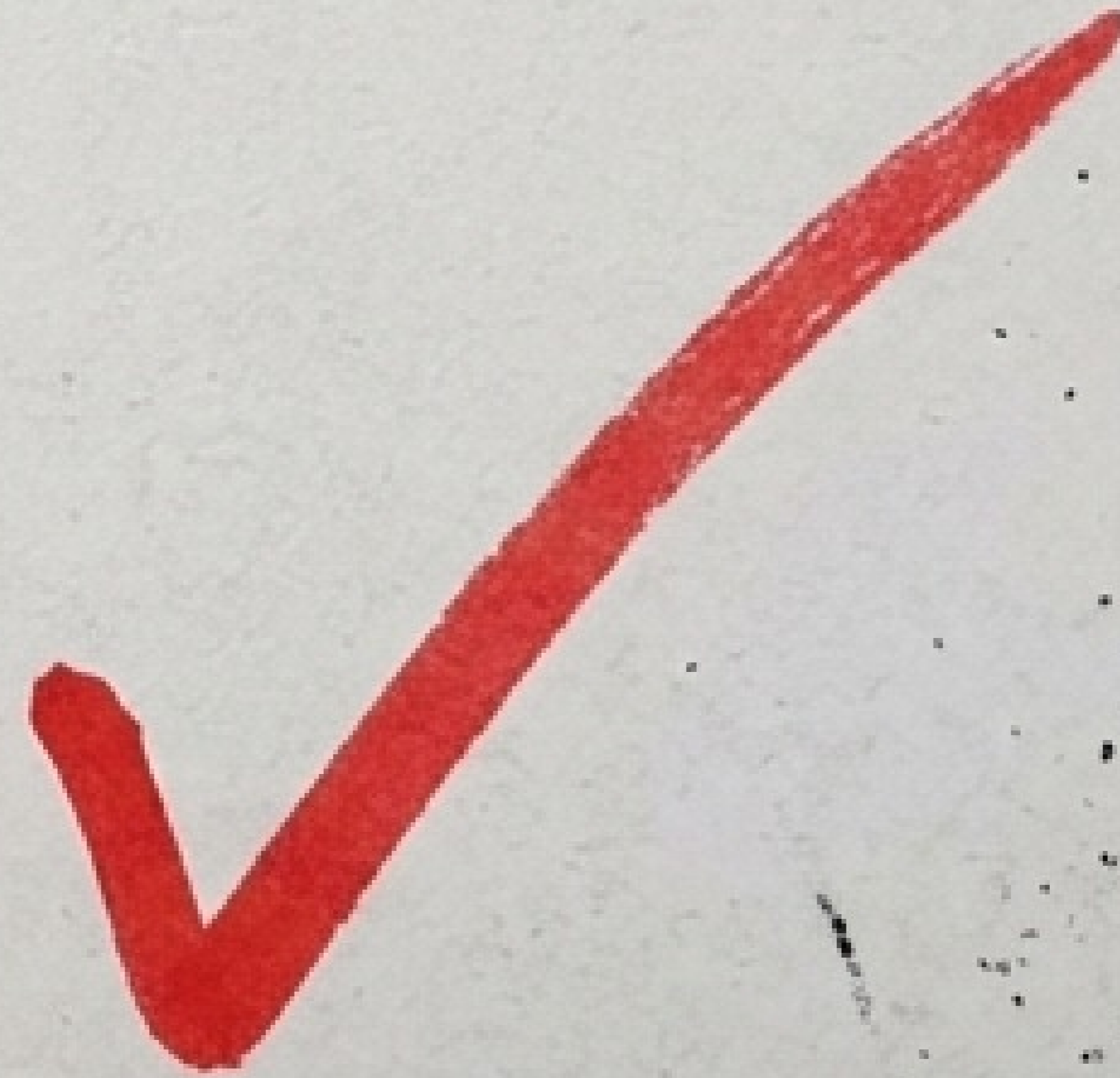
Q1. Which of the following is a metal?

A) Oxygen

B) Sulfur

C) Copper

D) Nitrogen



Q2. Metals generally form which type of ions?

A) Negative ions

B) Positive ions

C) Neutral ions

D) No ions

Remember:
Metals LOSE
electrons to
become positive (+)

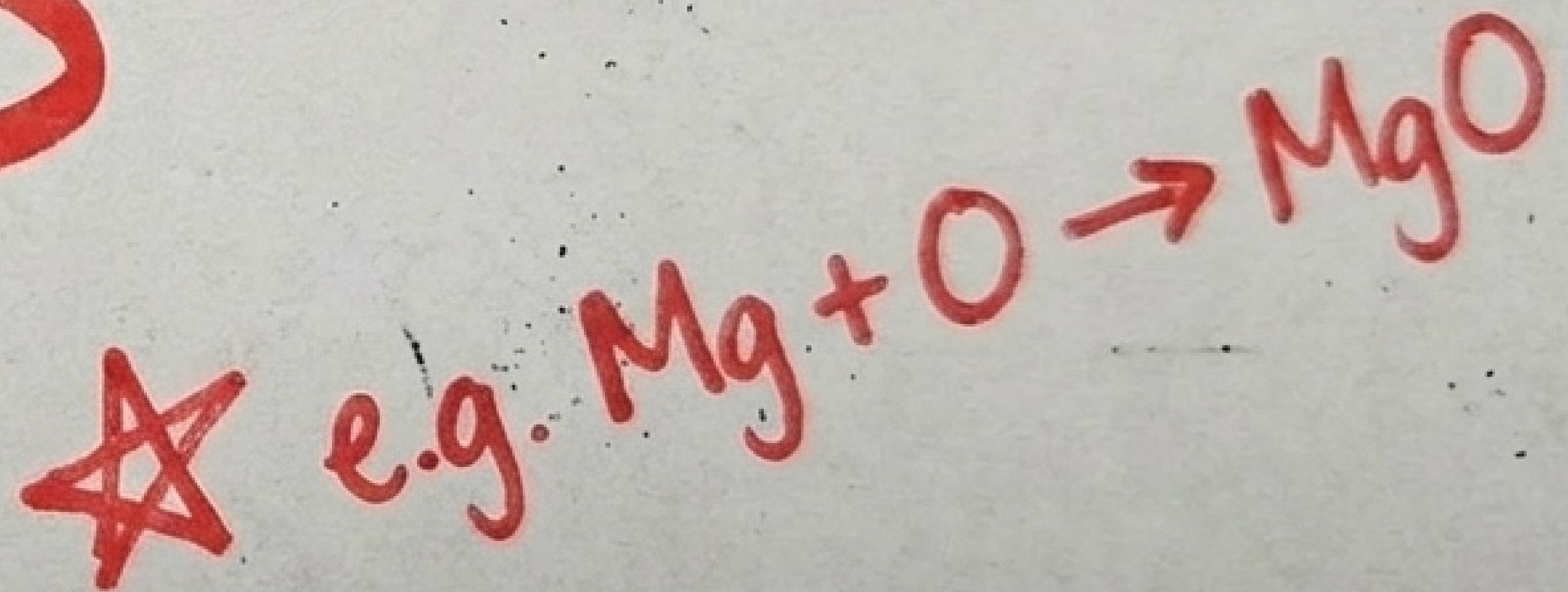
Q3. Which compound is formed when metal reacts with oxygen?

A) Metal hydroxide

B) Metal oxide

C) Salt

D) Acid



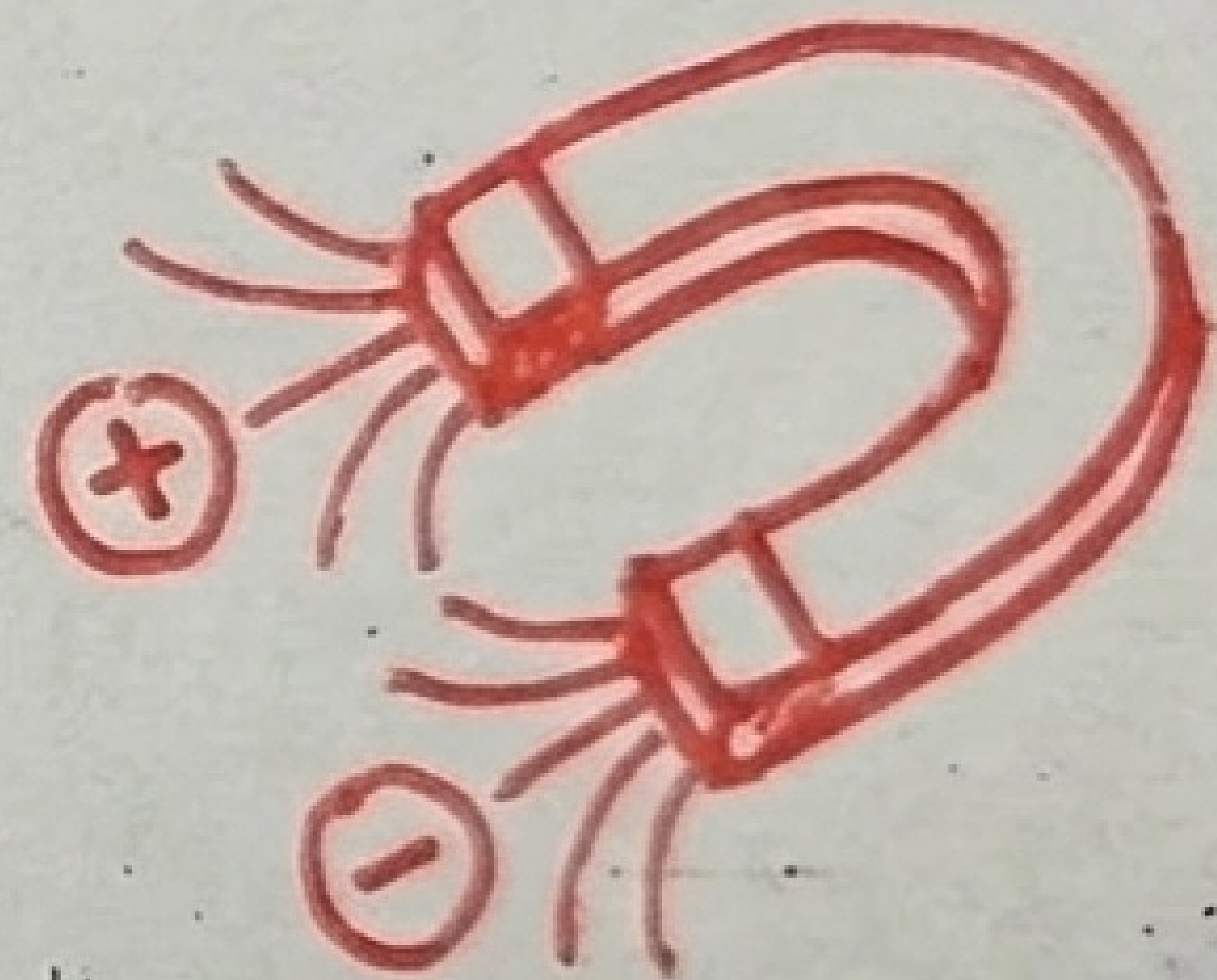
Q4. Ionic bonds are formed between:

A) Two metals

B) Two non-metals

C) Metal and non-metal

D) Noble gases



Q5. Which of the following is a reactive metal?

A) Sodium

B) Gold

C) Silver

D) Platinum

5/5 A*

End of Notes!

**The Golden Rule to remember:
Opposites attract.**

**Metals are the givers (+),
Non-metals are the takers (-).**

