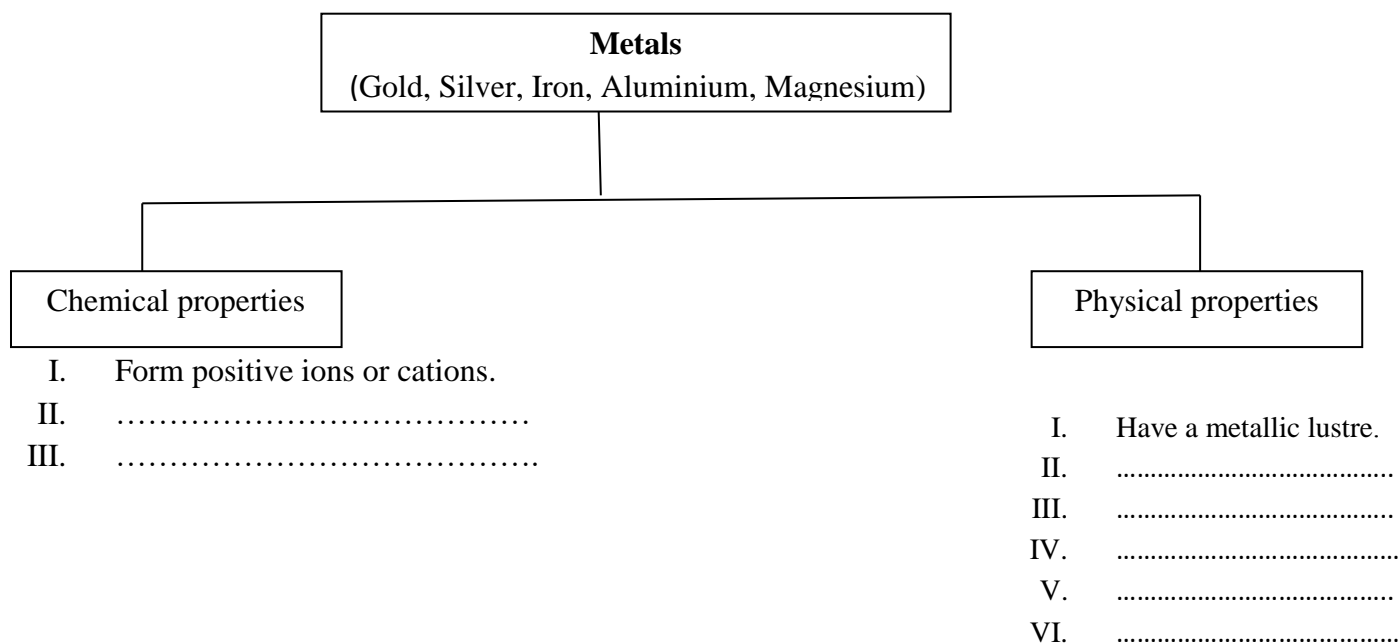




Structure of matter

1. Complete the below chart considering physical and chemical properties of metals.



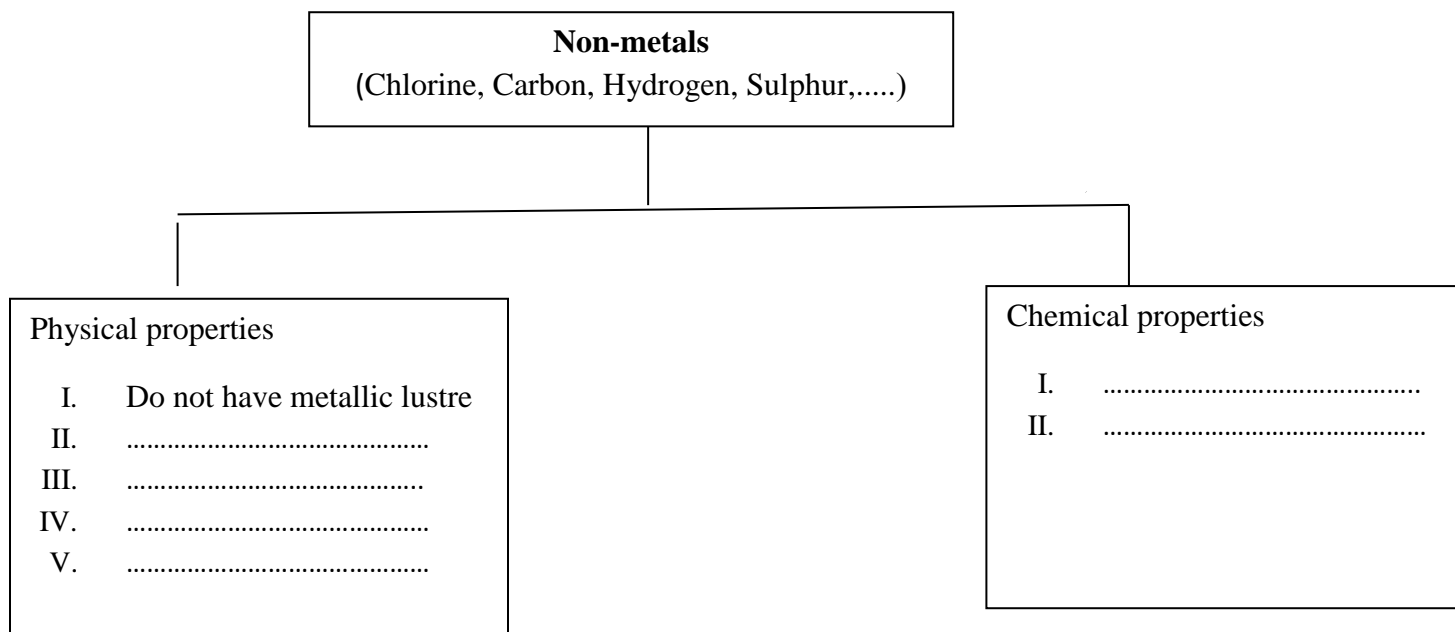
2. Sodium is a highly reactive element.

- How it is stored?
- Write physical properties of Sodium metal.
- Write chemical properties of Sodium metal.
- What are the uses of Sodium metal?

3. When heated in air, magnesium burns with a bright white flame.

- Mention physical properties of Magnesium metal.
- Write how the Magnesium metal reacts with the following things.
 - Air
 - Steam
 - Cold water
 - Hot water
 - Diluted acid
- What are the uses of Magnesium metal?

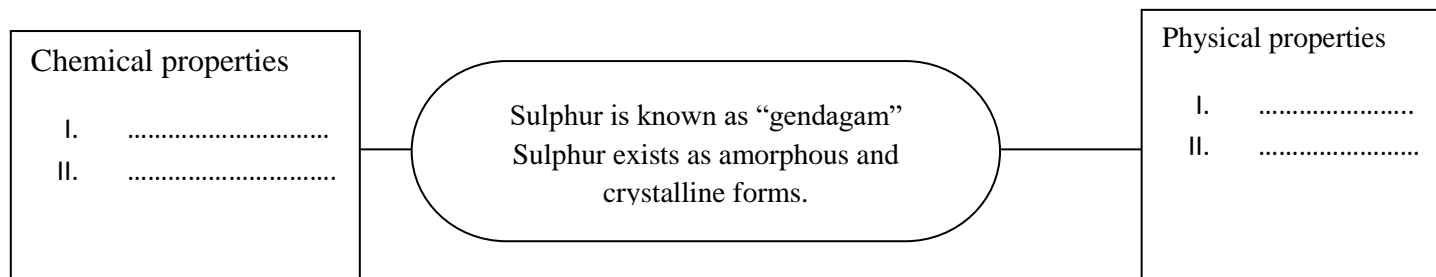
4. Complete the below chart using chemical and physical properties of non-metals.



5. Nitrogen gas is about 78.1% by volume in the atmosphere.

- I. Write physical properties of Nitrogen gas.
- II. Write are the chemical properties of Nitrogen gas.
- III. What are uses of Nitrogen gas?

6. Complete the below chart with your knowledge about Sulphur.



7. Mention the uses of Sulphur.

8. Carbon exists as carbondioxide gas in the atmosphere.

- i. Categorize allotropy forms of Carbon with examples.
- ii. Mention physical properties of Carbon.
- iii. Mention chemical properties of Carbon.

9. Complete the below chart.

Forms of Carbon	Uses
1. Amorphous Carbon	
2. Coal	
3. Graphite	
4. Diamond	
5. Charcoal	
6. Carbon fibres and Carbon tubes of nano-scale	

10. Silicon and Boron are metalloids.

- Mention uses of Silicon.
- Mention uses of Boron.

11. Mention acidic, basic and amphoteric nature of below oxides.

Elements in 3 rd period.	Na	Mg	Al	Si	P	S	Cl
Oxide	Na ₂ O	MgO	Al ₂ O ₃	SiO ₂	P ₂ O ₅	SO ₃	Cl ₂ O ₇
Acidic / Basic nature		Weakly basic				Strongly acidic	

12. Describe the clear pattern in the variation of the acidic/basic properties of the oxides from left to right in a period in Periodic table by using the above table.

13. What is valency?

14. Fill in the blanks in the given table.

Element	Atomic number	Electronic configuration	Valency
H	1	1	1
B	5		3
C	6	2,4	
O	8		
Ne	10	2,8	
Mg	12		
S	16		
K	19		

15. State the two steps method used in writing chemical formulae of compounds.

16. Write the chemical formulae of the following compounds.

- Sodium Chloride
- Calcium Chloride
- Aluminium Oxide
- Carbon sulphide

17. Write the chemical formulae of the following compounds. Use your knowledge about polyatomic ions.

- Sodium nitrate
- Magnesium nitrate
- Aluminium phosphate
- Calcium chromate