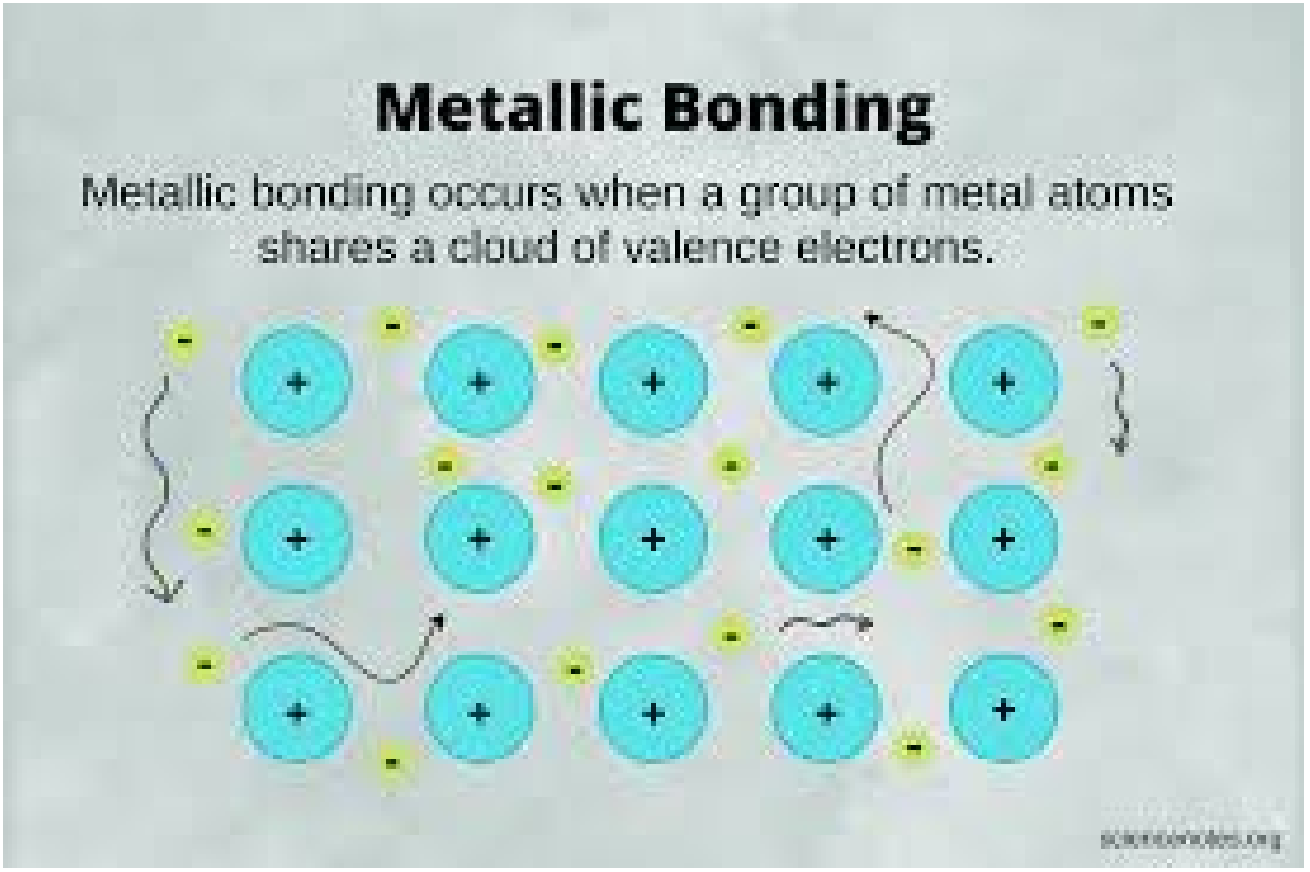
Chemistry

What is metallic bonding

- Metals have giant structure made up of metal atoms arranged in regular patterns
- The outer shell electrons of this metal atoms are delocalised mean they are free to move
- There are strong forces of attraction between positive metal ions and delocalised negative electrons
- These strong forces are called metallic bonding



Substances with metallic bonds

- Metallic bonding is found in pure metals like Copper aluminium and iron

- alloys is the mixture of Metals or nonmetals with other elements

Properties of metals explained by metallic bonding

- High melting in boiling point
- the electrostatic attraction between positive metal ions And delocalised electrons is very strong
- It takes a lot of energy to break these bonds
- That is why most metals are solid at room temperature and they have melting and boiling point

They are good conductors of heat and electricity

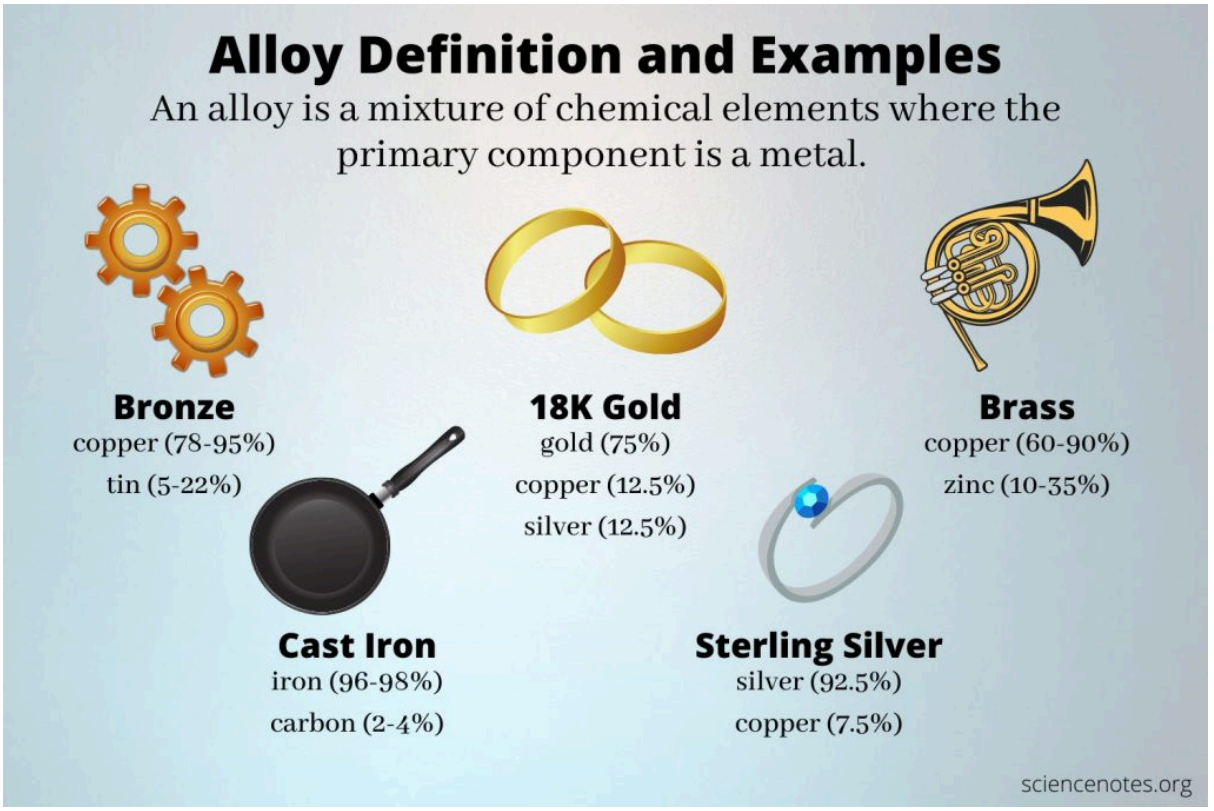
- Delocalize electron can move freely through the structure
- These moving electrons carry electrical charge and they transfer heat energy
- So metals are good conductor of both heat and electricity

Malleable can be bent or shape

- The layer of atoms in metal can slide over each other easily
- this makes metal meaning they can bend hammered into sheets without breaking
- alloys are harder than pure metal

What are alloys

- Pure metals are substances too soft for certain uses
- To make them harder we mix them with the other elements this forms alloy
- Alloy is a mixture of two or more metals



Why alloys are harder

- The atoms of different elements have different sizes
- when these different atoms are mixed the distorted the layers in the metal surface
- this makes it harder to slide over each other so alloys are stronger and harder than pure matter

