



OCR B GCSE Chemistry

Topic 3: Chemicals of the natural environment

How are the atoms held together in a metal?

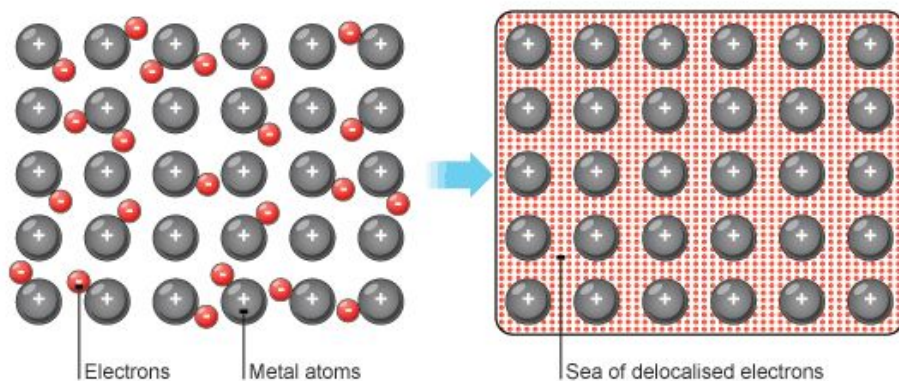
Notes





1. Describe the nature and arrangement of chemical bonds in metals

- Metals
 - o have metallic bonding
 - o Metals consist of giant structures of atoms arranged in a regular pattern.
 - o The electrons in the outer shell of metal atoms are delocalised and so are free to move through the whole structure.
 - o The sharing of delocalised electrons gives rise to strong metallic bonds.



2. Explain how the bulk properties of metals are related to the type of bonds they contain

- Metals have giant structures of atoms with strong metallic bonding.
 - o Therefore, most metals have high melting and boiling points.
 - o They can conduct heat and electricity because of the delocalised electrons in their structures.
 - o Conduction depends on the ability for electrons to move throughout the metal.
 - o The layers of atoms in metals are able to slide over each other, so metals can be bent and shaped.

