

## 6 Metals

1. Learn the reactivity series of metals:

Potassium  
Sodium  
Calcium  
Magnesium  
Aluminium  
(carbon)  
Zinc  
Iron  
(hydrogen)  
Copper  
Silver  
Gold

2. Oxidation is the gain of oxygen.
3. Reduction is the loss of oxygen.
4. Extraction of metals involves reduction of ores
5. Very reactive metals such as aluminium are extracted from their ores by electrolysis.
6. In electrolysis, oxidation takes place at the anode [the positive electrode].
7. In electrolysis, reduction takes place at the cathode [the negative electrode].
8. Oxidation is loss of electrons.
9. Reduction is gain of electrons.



10. Unreactive metals are found as the uncombined element.
11. Metals such as iron can be extracted from their ores by heating with carbon
12. Recycling metals preserves the environment and supply of valuable raw materials
13. Phytomining uses plants to absorb metal compounds from low grade ores.
14. Bioleaching uses bacteria that produces a solution containing the metal ions which can be obtained by displacement using scrap iron.