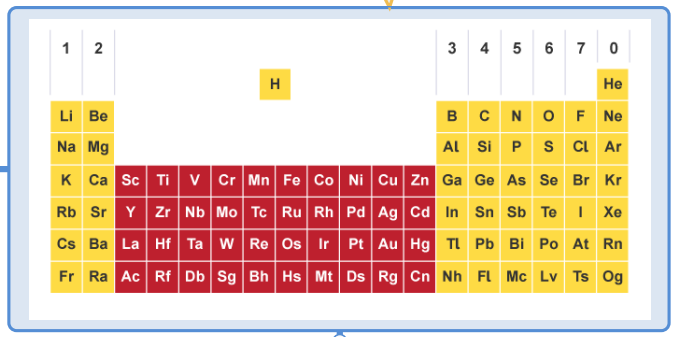
Transition Elements

https://upload.wikimedia.org/wikipedia/commons/thumb/8/84/Periodic_table.svg/779px-Periodic_table.svg.png?20171004221501



Transition Elements are highlighted in RED

Properties

- Good conductors of both heat and electricity
- Dense, strong and shiny
- Less reactive than Group 1 metals
- have higher melting points than Group 1 metals
- Compared to Group 1 metals they are denser, stronger and harder

Ions

- Often have more than one ion
  - e.g. Fe^{2+} , Fe^{3+}
    - e.g. Cr^{2+} , Cr^{3+}

Compounds

- different ions form different coloured compounds
  - e.g. Copper (II) sulfate is blue
  - e.g. Potassium manganate is purple
- Colours in gemstones are all due to the transition metals
  - e.g. blue sapphires
  - e.g. green emeralds

Good Catalysts

- e.g. Iron is the catalyst in the Haber process
  - for making ammonia
- e.g. Nickel is useful for turning oils into fats
  - for making margarine