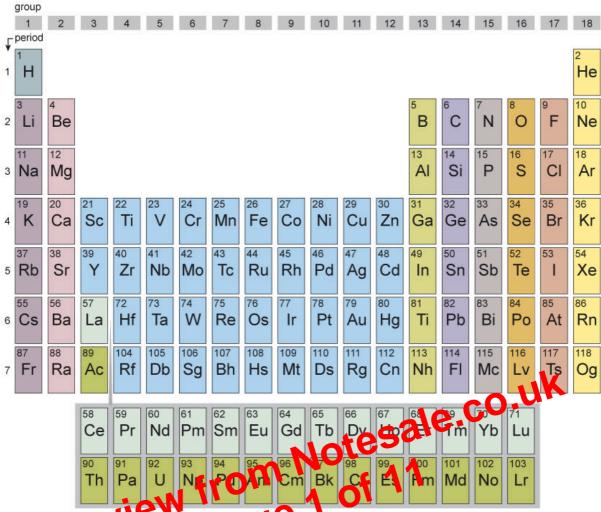
## PERIODIC TABLE (by Dmitri Mendeleev, 1869)



Catomic number of transparent of protons (& electrons)

- Atomic mass on bottom relative atomic mass = protons + neutrons
- Symbols consist of 1-2 letters, first capital e.g. Mg
- Vertical groups 1-18 (= number of valence electrons)
- Horizontal periods 1-9 (= number of atomic orbitals)
- S block alkali metals & alkaline earth metals (soft, reactive) + hydrogen, helium
  - o 1-2 valence electrons
  - o 1 s orbital in all shells
- P block varied elements (non-metals, metals, metalloids)
  - o 1-6 valence electrons
  - o 3 p orbitals in shells 2 and up
- D block transition metals (hard, dense, good conductors, less reactive, coloured compounds)
  - 1-10 valence electrons
  - 5 d orbitals in shells 3 and up
- F block bottom group. Lanthanides & actinides (soft metals, many are radioactive)
  - o 7 f orbitals in shells 4 and up