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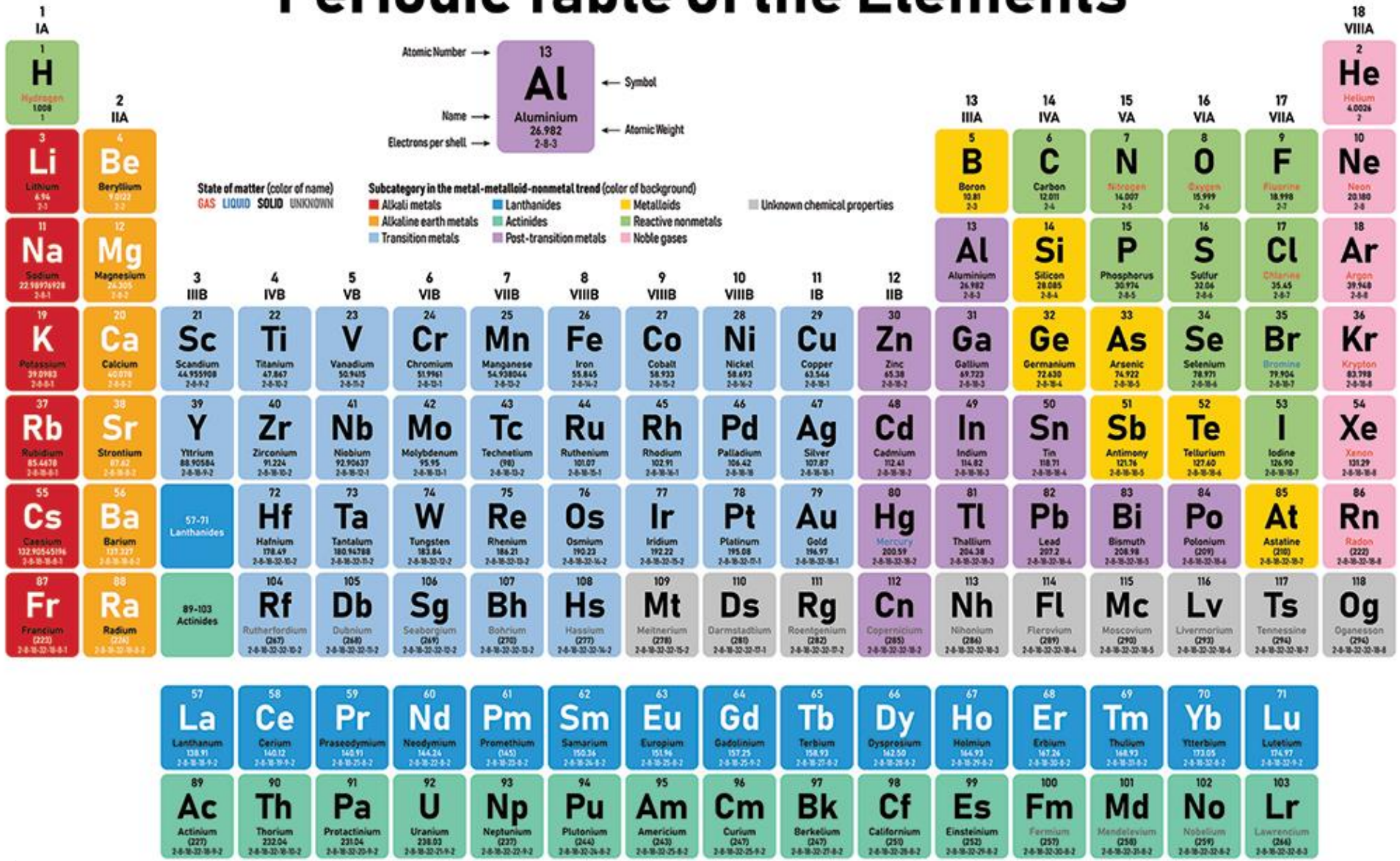
Periodic Table
Session 2

Migma Tshering

Periodic Table of the Elements



Source: Science News for Students

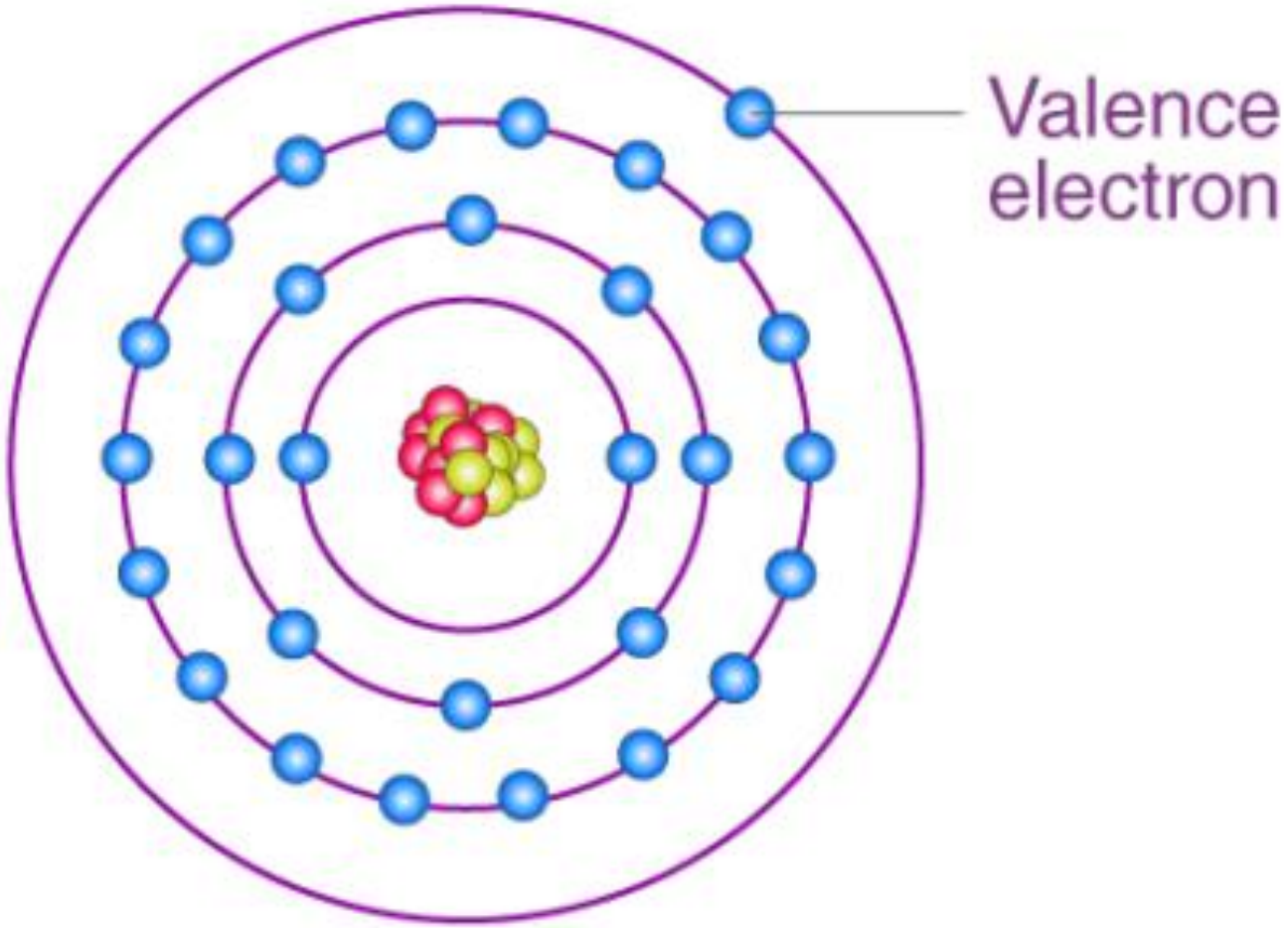
Learning Objectives

Periodic Properties

- *Valence Electron*
- *Atomic Size*
- *Metallic Character*
- *Ionization Enthalpy*

Periodic Properties:
VALENCE ELECTRONS

Valence Electron



Periodic Properties: Valence Electron

The electrons present in the outermost shell of an atom

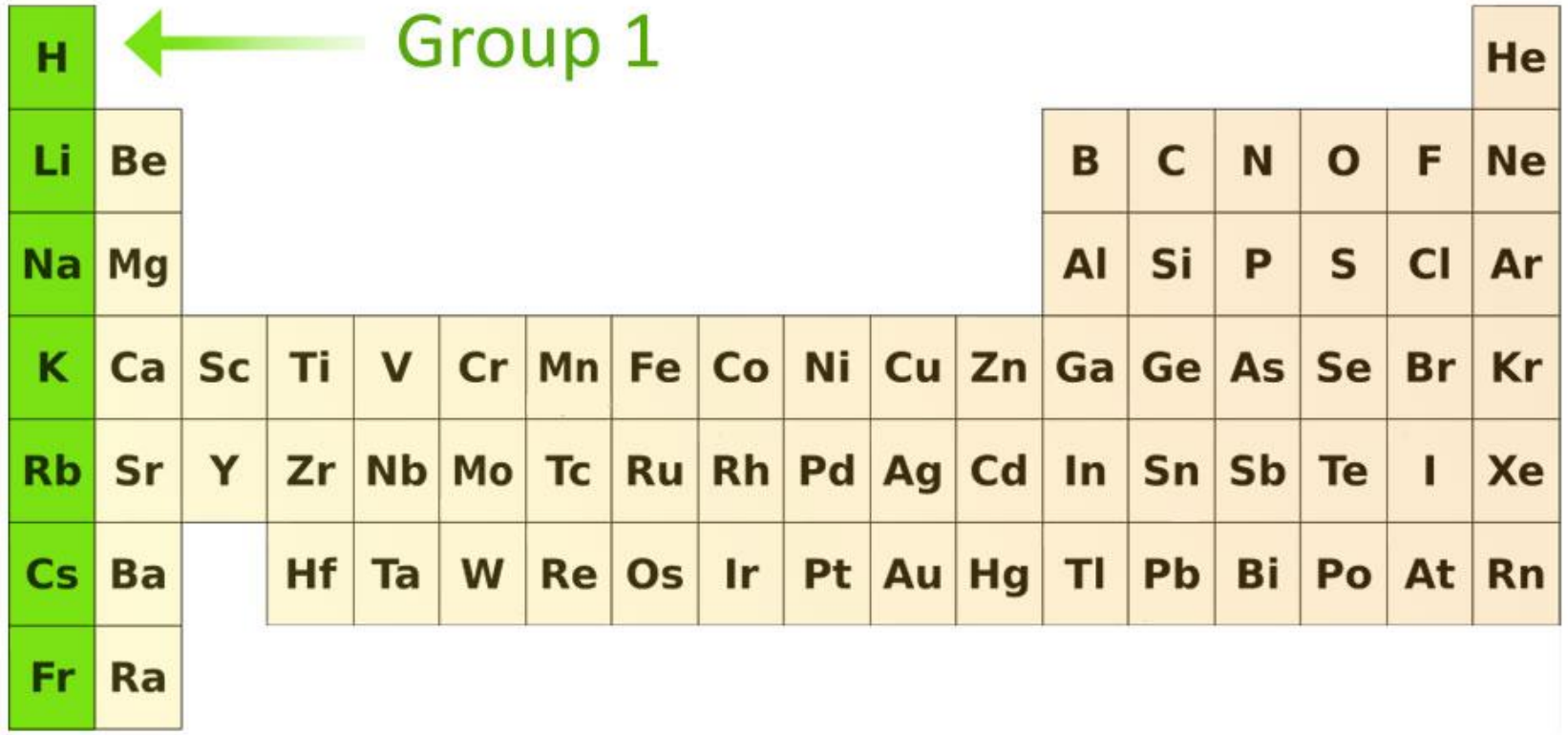
The elements present in the same group contain **SAME number** of valence electron.

Periodic Properties: Valence Electron

For example, all the elements in Group 1 have same valence electron (i.e. 1 valence electron)

For Group 17, all the element contain 7 valence electrons.

Periodic Properties: Valence Electron

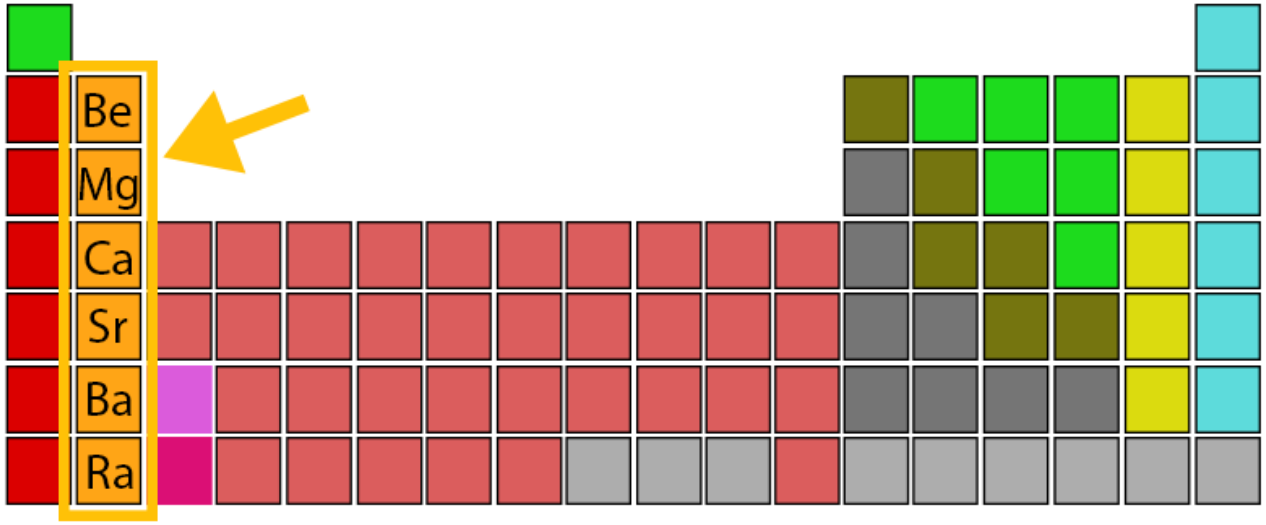


Group 1 contain

ONE Valence electron

Source: Toppr

Periodic Properties: Valence Electron



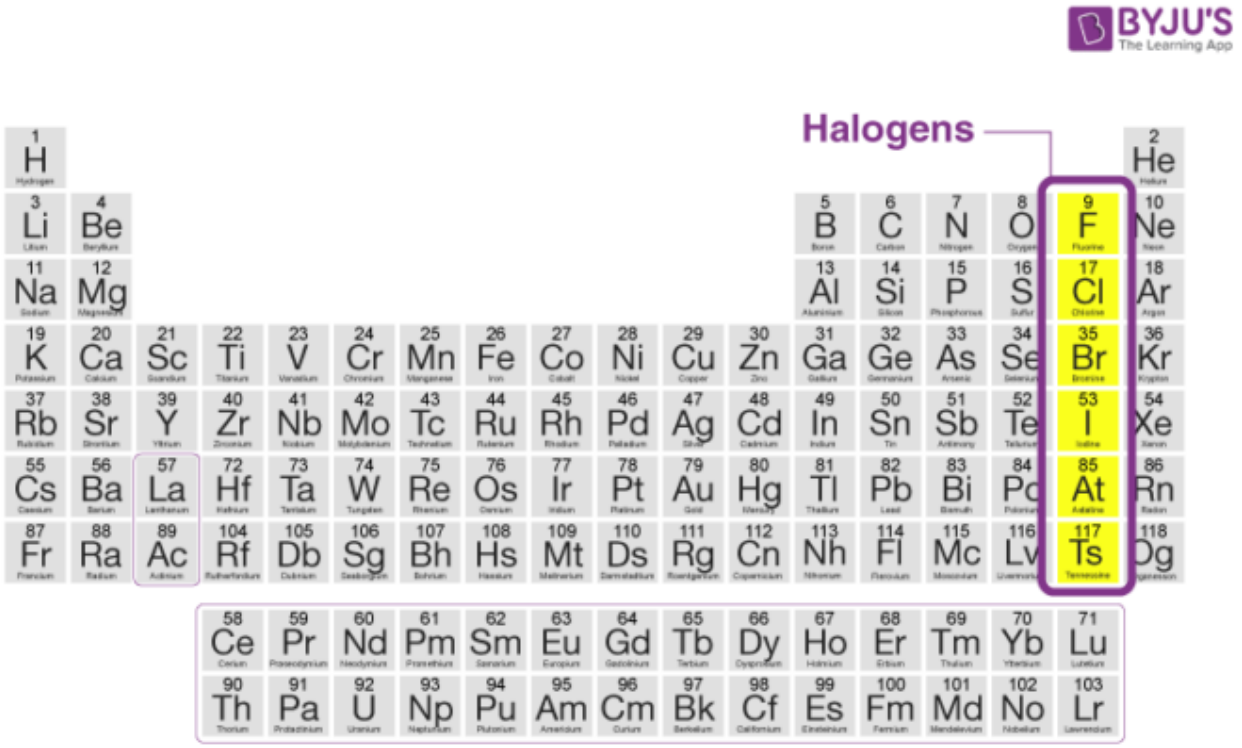
Group 2:

TWO Valence Electrons

Source: Pinterest

Source: Pinterest

Periodic Properties: Valence Electron

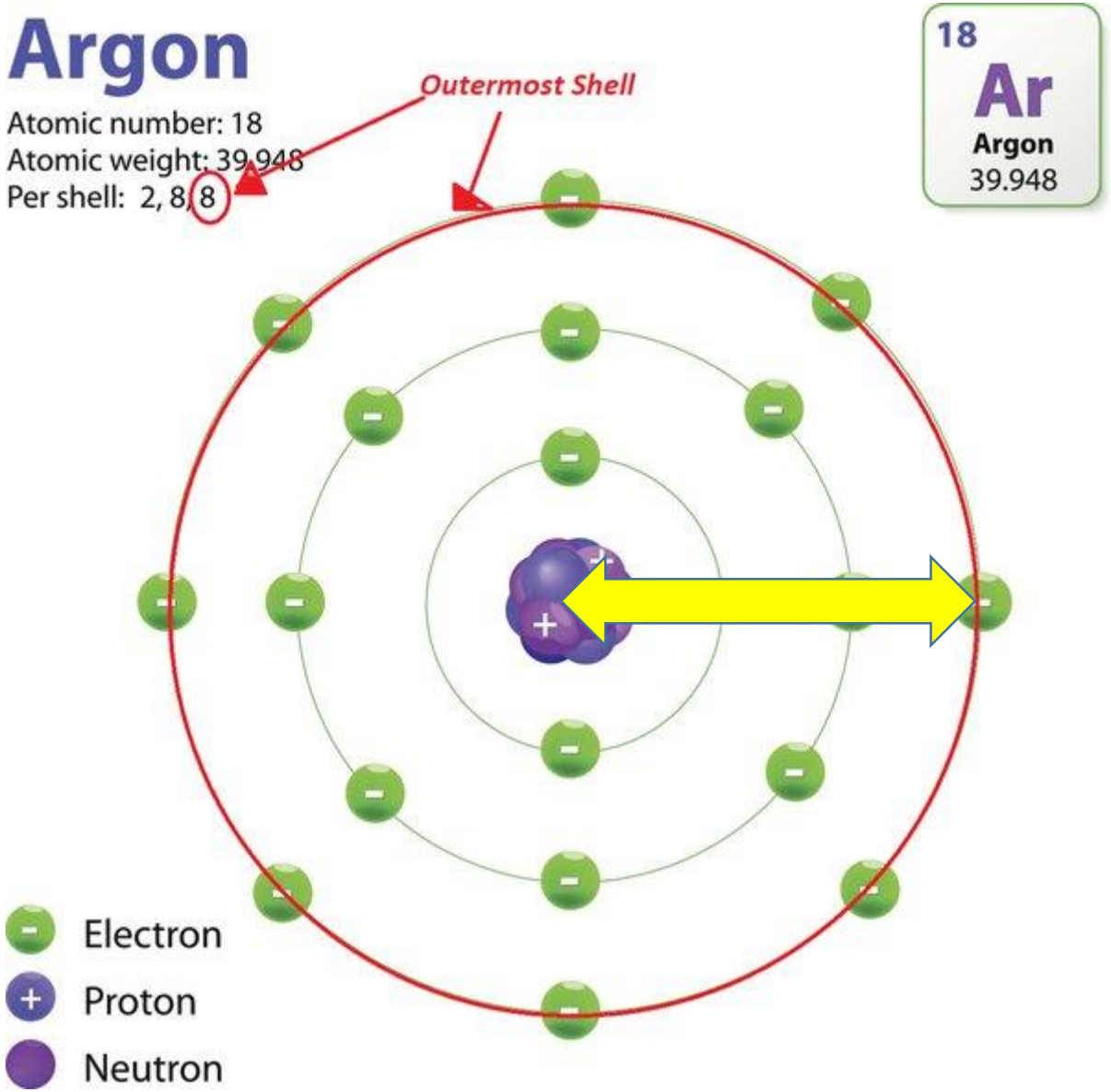


Group 17:

SEVEN Valence Electrons

Periodic Properties:
ATOMIC SIZE

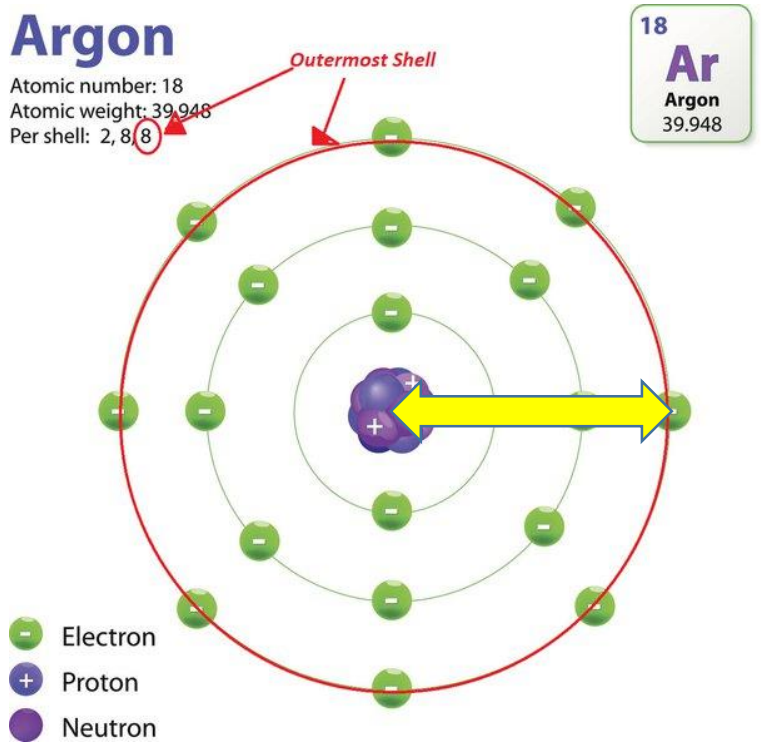
Atomic Size



Source: Quora

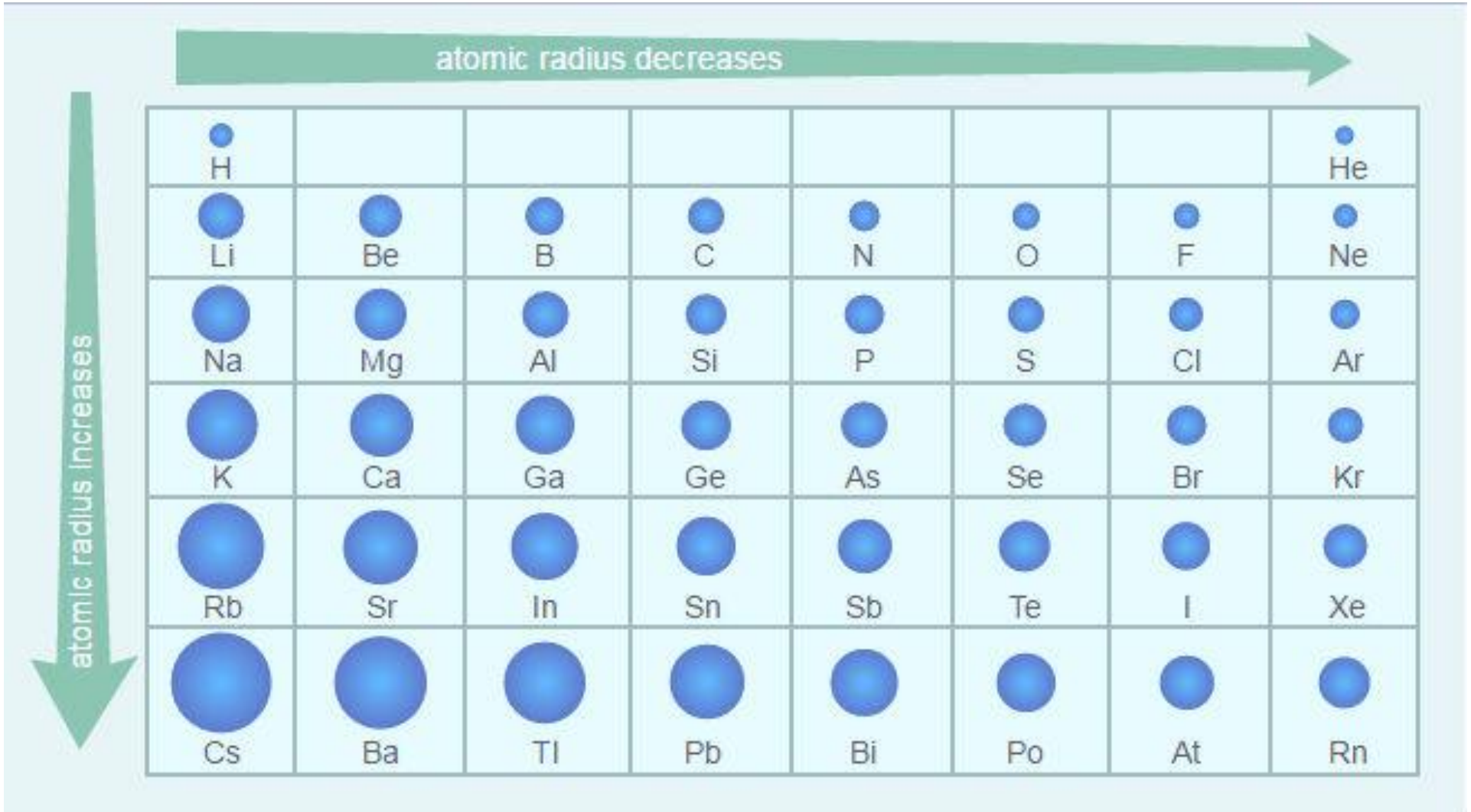
Periodic Properties: Atomic Size

The distance between the centre of the nucleus and the outermost shell



Source: Quora

Periodic Properties: Atomic Size

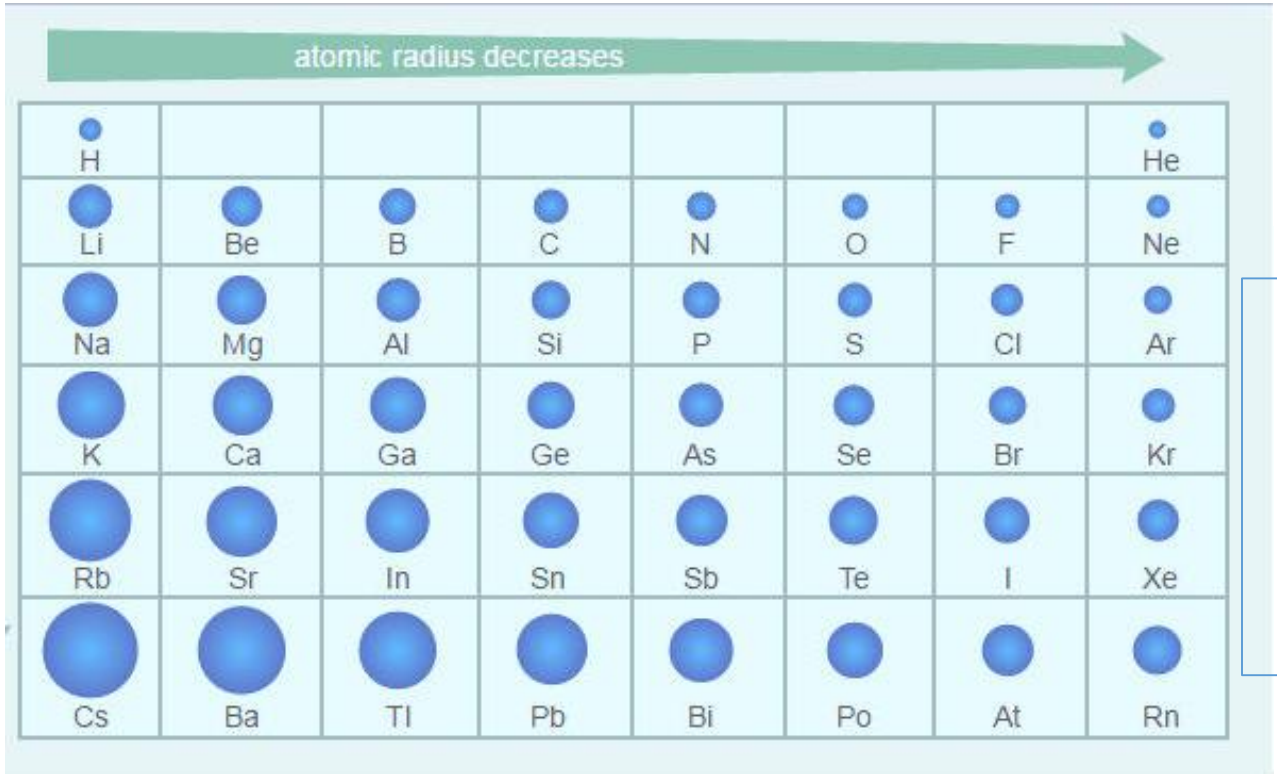


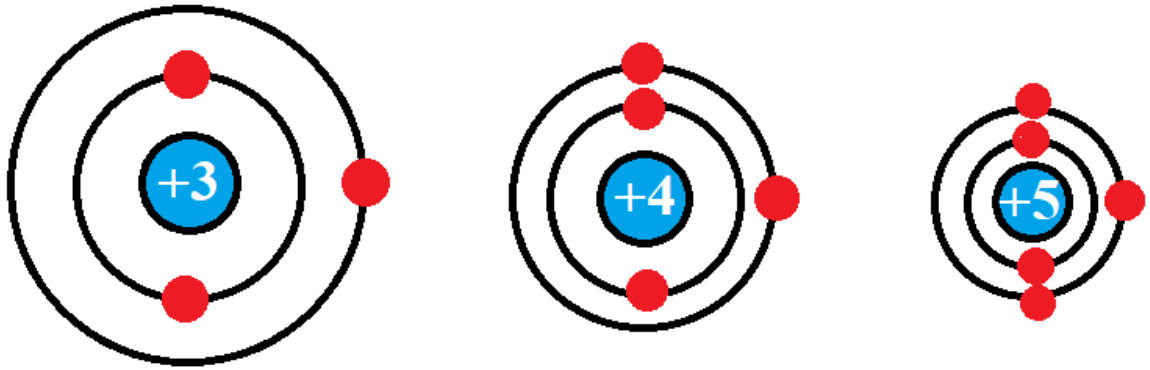
Source: Byju's

Periodic Properties: Atomic Size

- **Across the Period:**

Atomic size (radius) decreases





- ❖ **Nuclear Charge Increases**

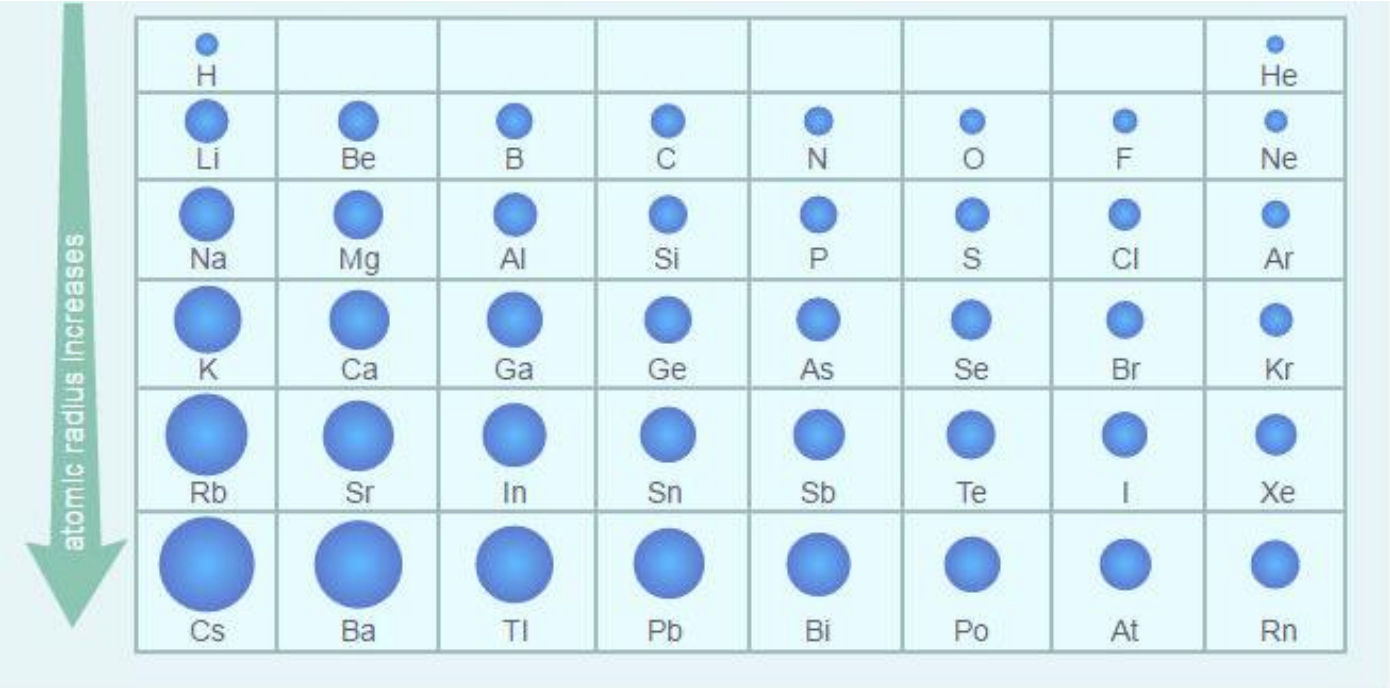
OR

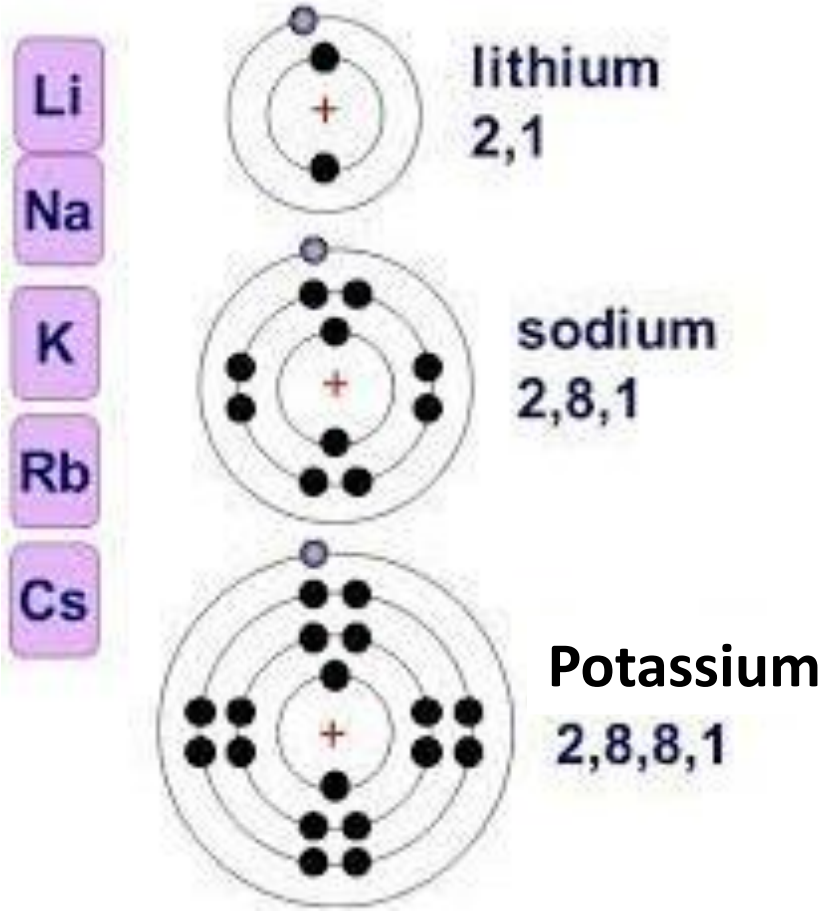
- ❖ **Attraction Increases**

Source: Byju's

Periodic Properties: Atomic Size

- **Down the Group:**
  Atomic size increases



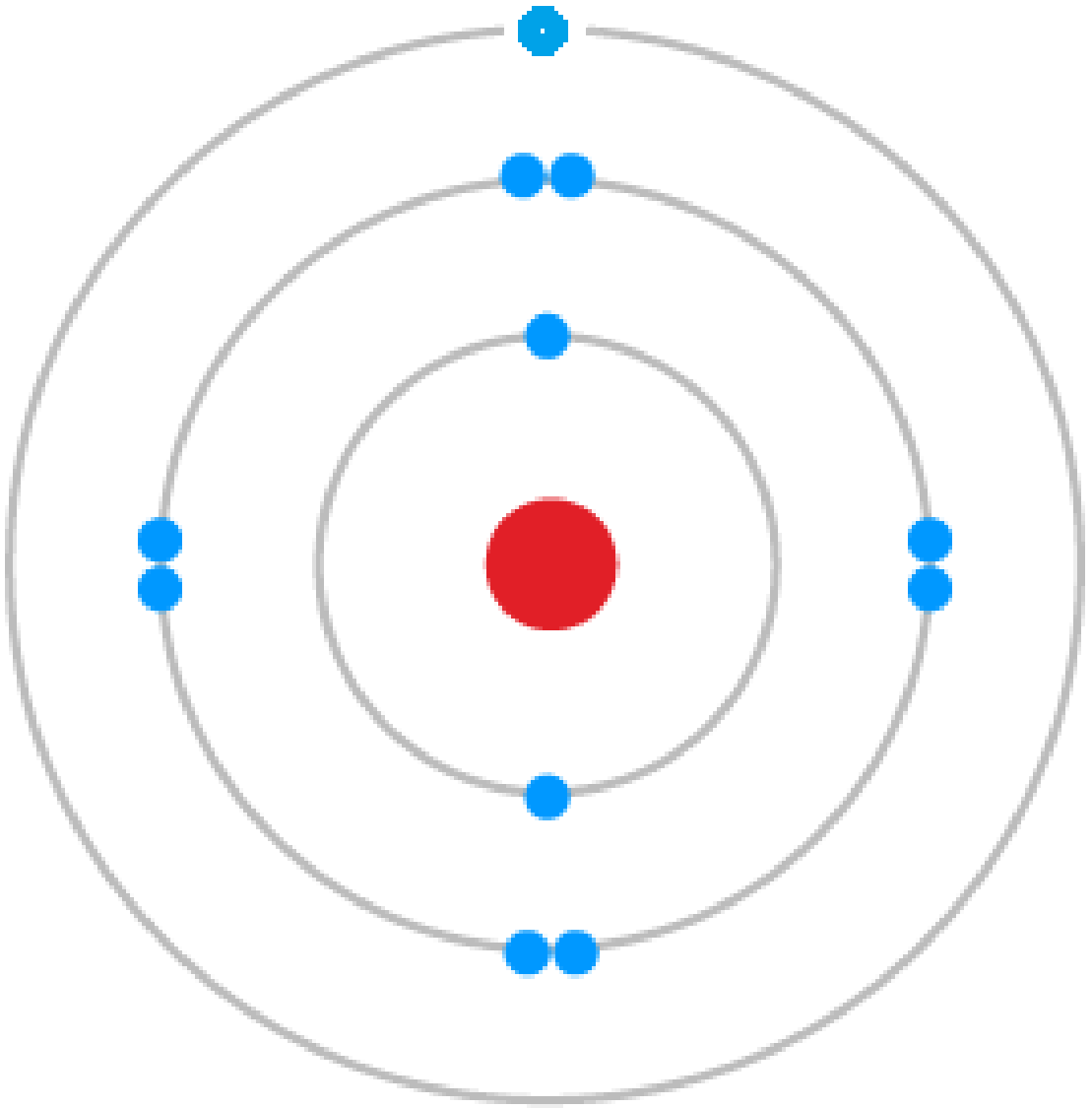


❖ **No. of Shell Increases**

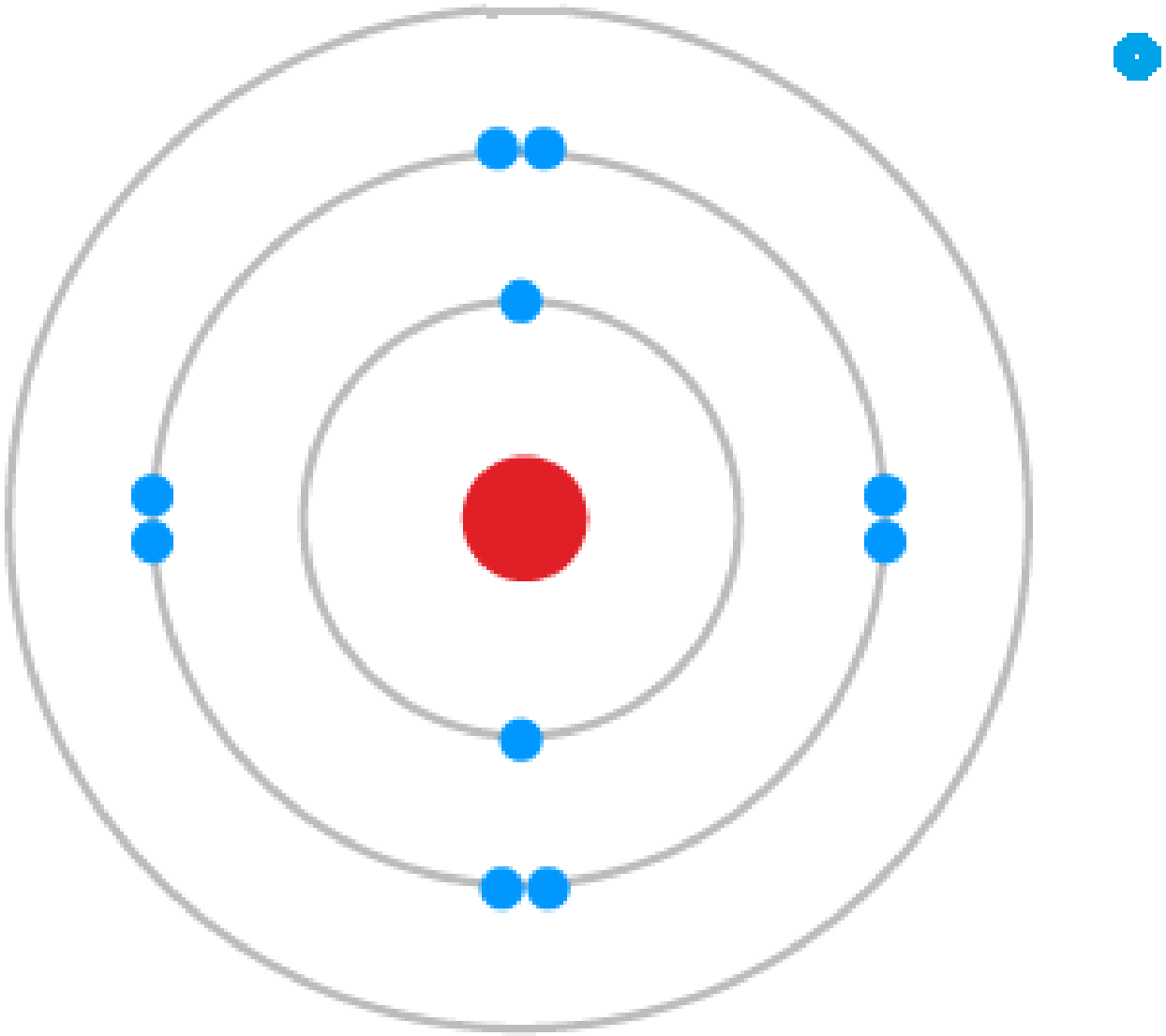
Source: Byju's & Slideplayer

Periodic Properties:
METALLIC CHARACTER

Metallic Character

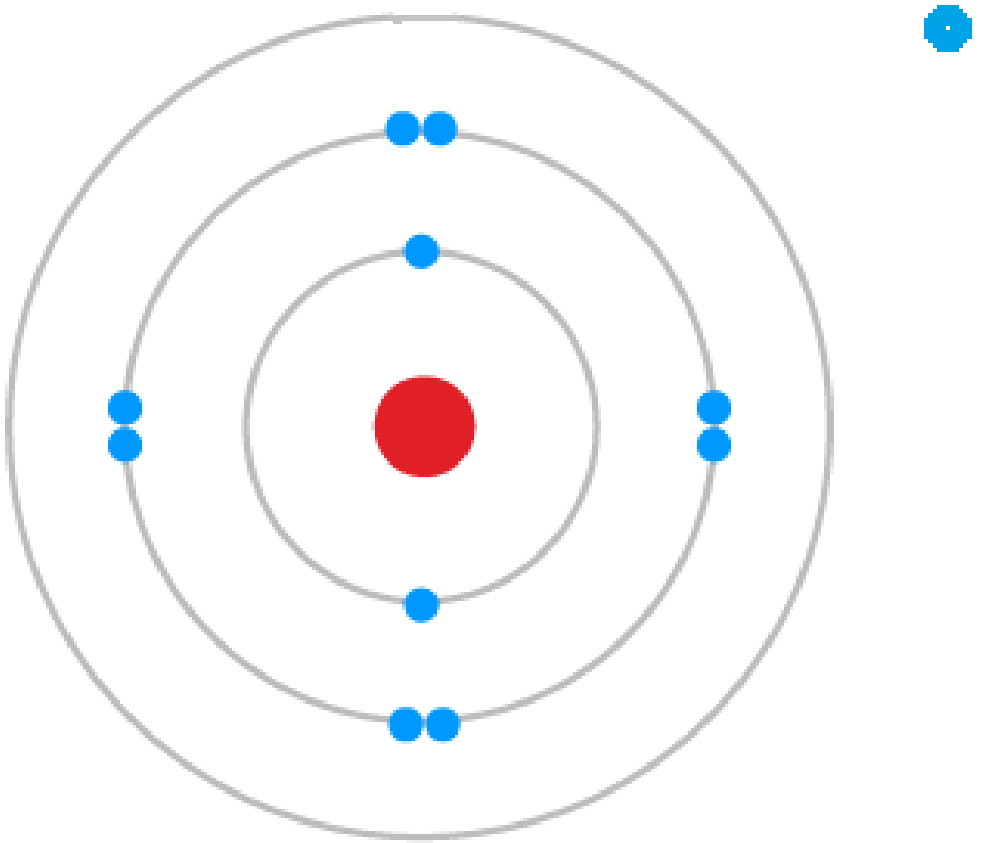


Metallic Character



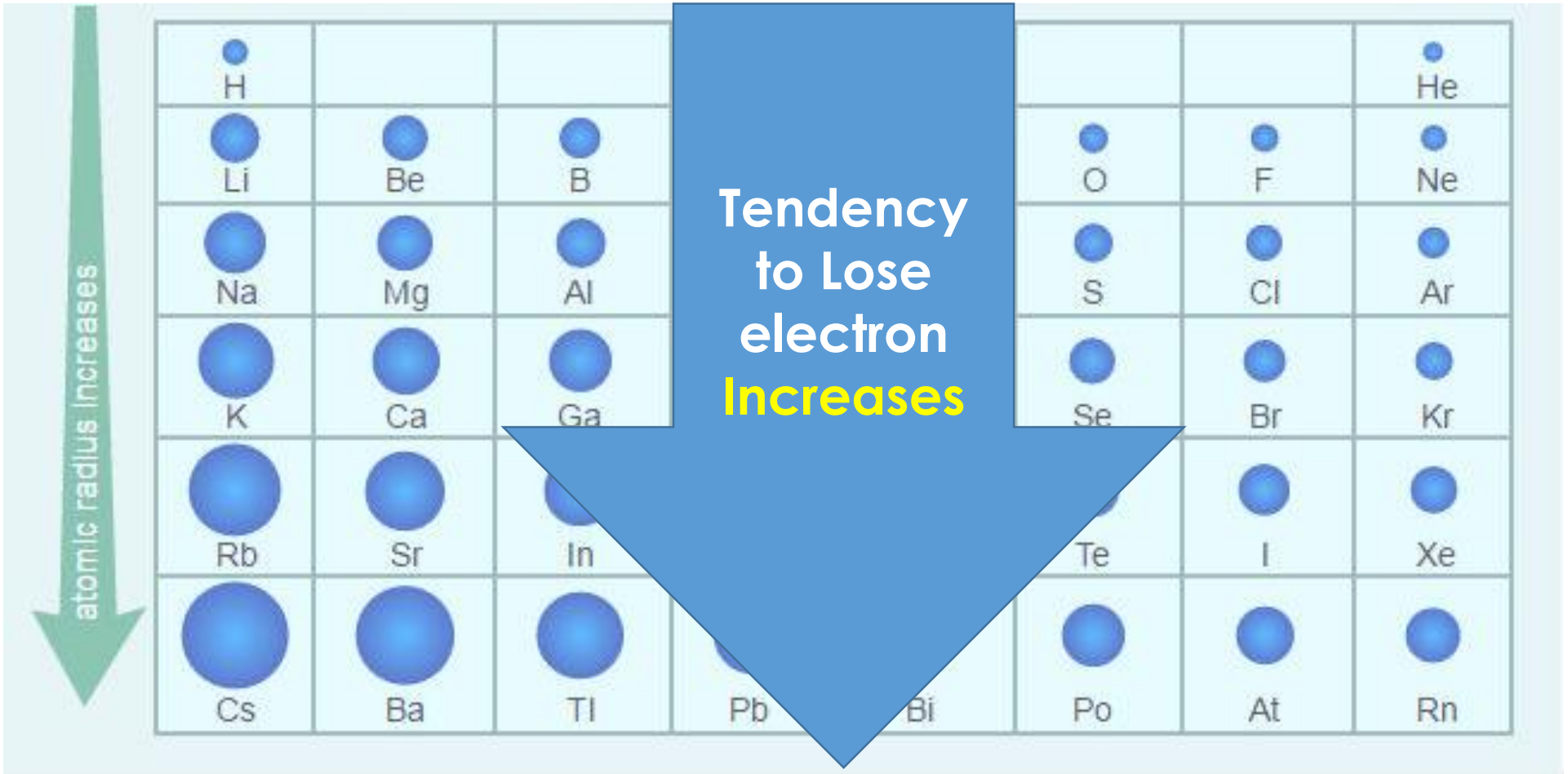
Periodic Properties: Metallic Character

The tendency to lose electron



Source: Quora

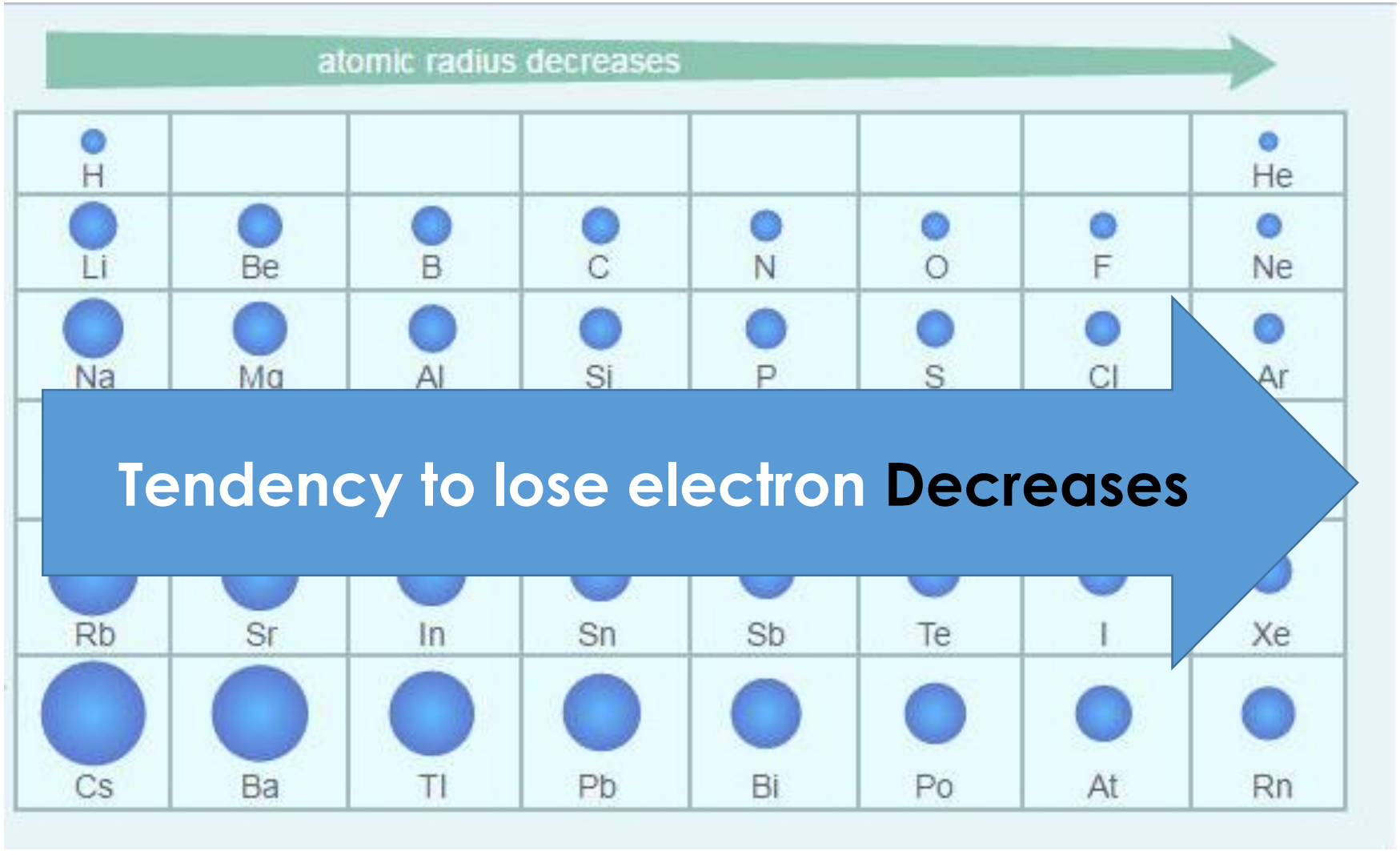
Periodic Properties: Metallic Character



Down the Group:

Metallic Character increases

Periodic Properties: Metallic Character

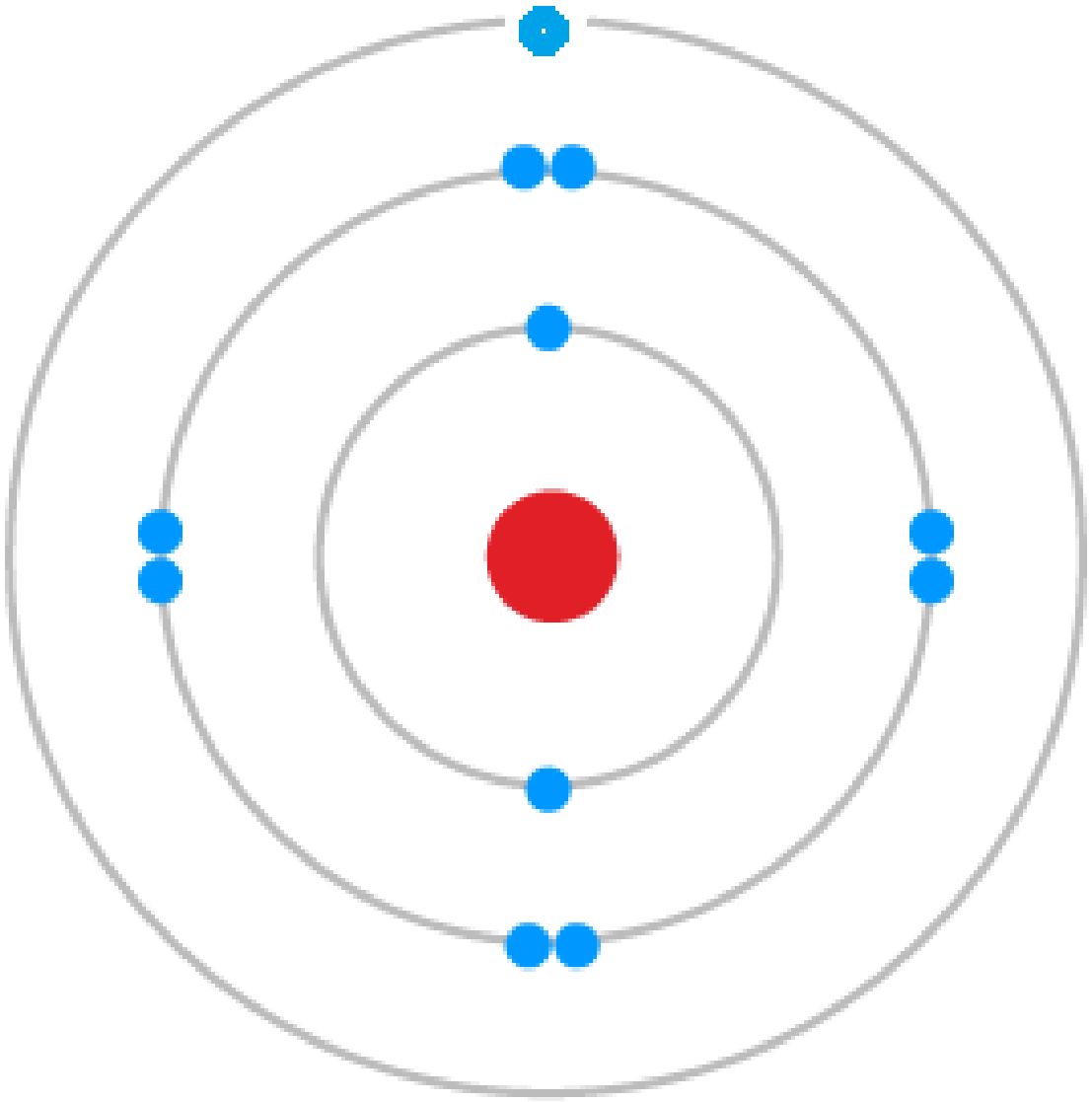


Across the Period:

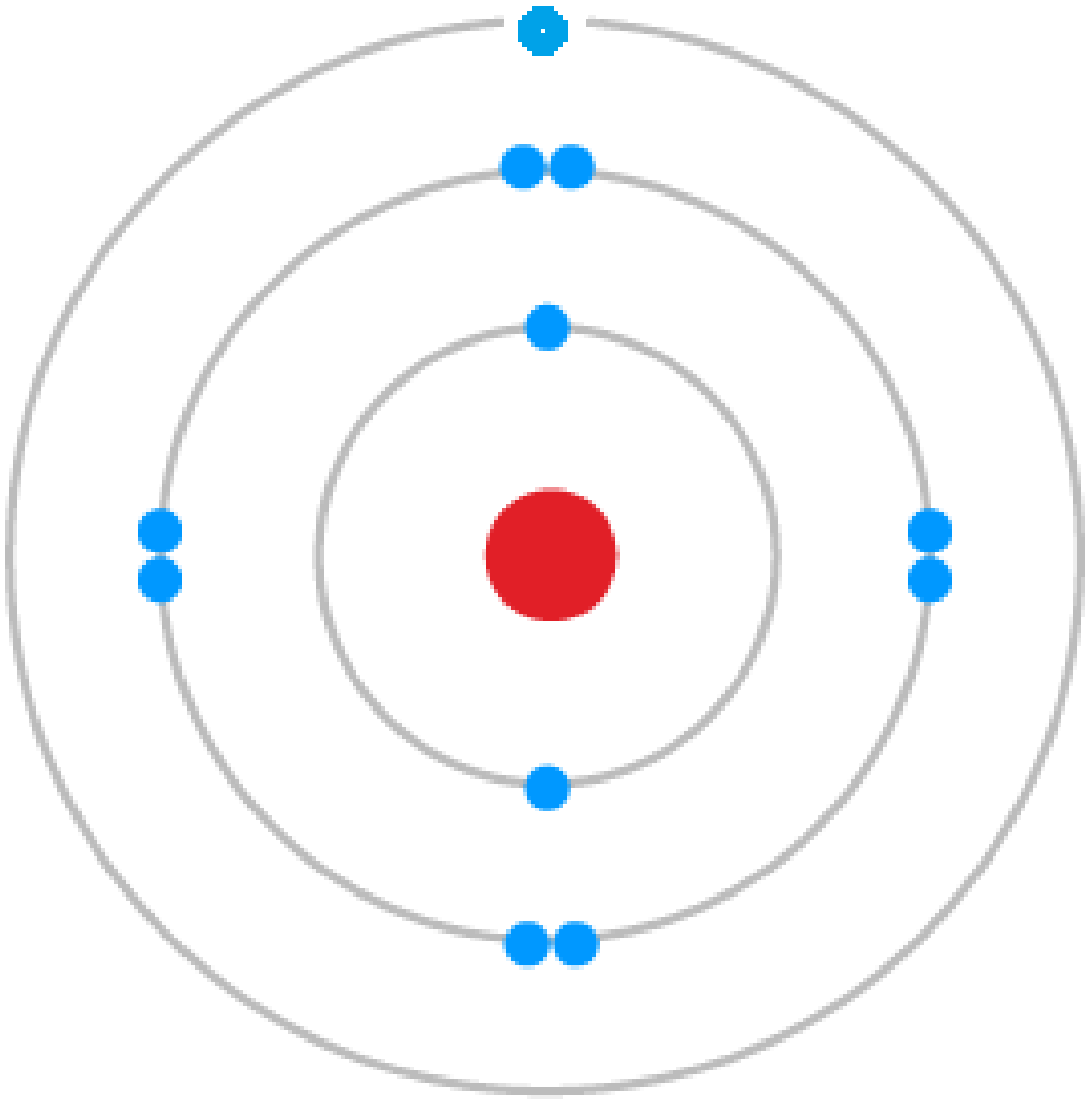
Metallic Character Decreases

Periodic Properties:
Ionization Enthalpy OR Ionization Energy

Ionization Energy

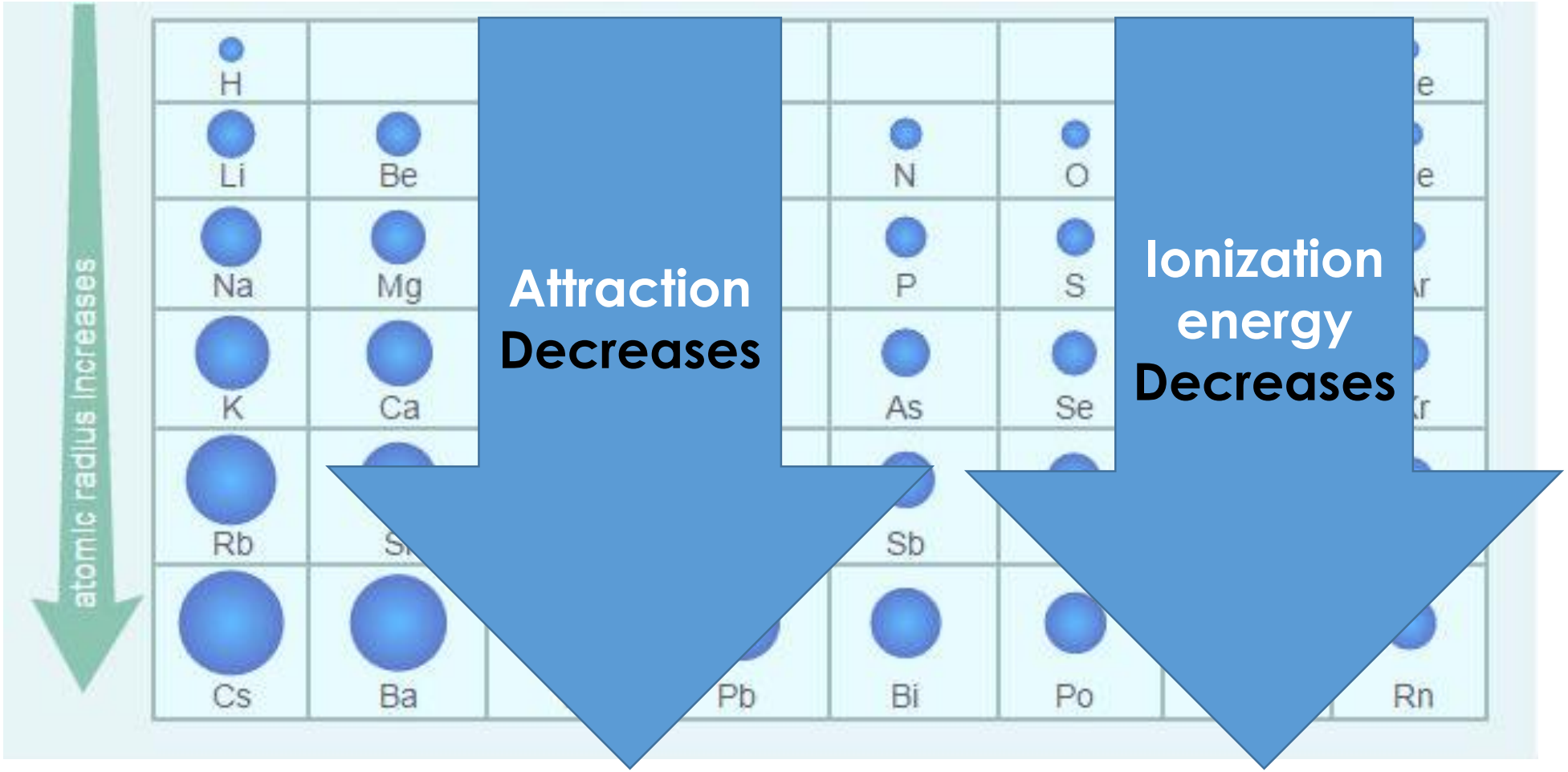


Ionization Energy



- Energy required
- to remove electron

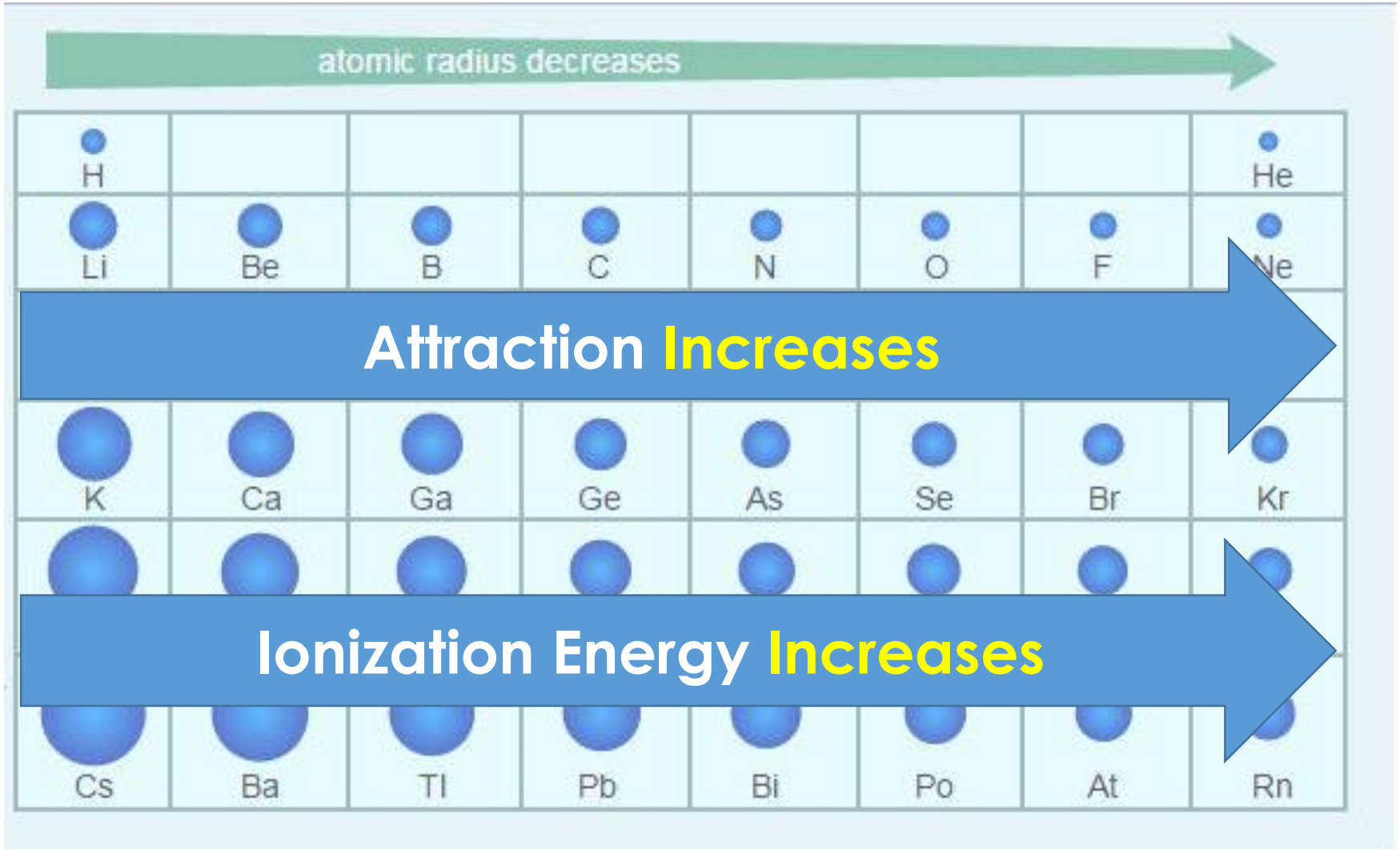
Periodic Properties: Ionization Energy



Down the Group:

Ionization Energy Decreases

Periodic Properties: Ionization Energy



Across the Period:

Ionization Energy Increases

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