**Year 11 – Periodic Trends**

**Watch, answer Qs and take notes:** <https://www.youtube.com/watch?v=hePb00CqvP0>

1. What is a line going horizontally on the periodic table called?
2. What is a line going vertically on the periodic table called?
3. How were the elements arranged in the table?
4. What are the 3 types of elements mentioned?

**Extra notes:**

1. Why do elements in the same group behave similarly?

1. What are valence electrons?
2. What is the first trend identified in the video?
3. What is the trend down the table?

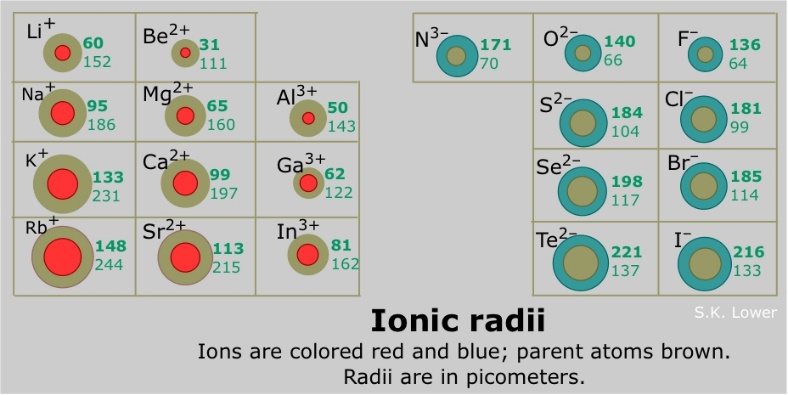
1. What is the trend across the table to the right and what causes it? (Key words: atomic radius, proton, electromagnetic attraction, electron shells)
2. Write the overall atomic radius trend seen on the table?

**Extra notes:**

1. Is Ionic radius the same as atomic radius? What is it?

1. Electrons repel each other so what happens when an electron is added?
2. What happens when an electron is removed?
3. What happens to Ions with the same electron configuration as the atomic number increases?

**Extra notes/examples:**



**Activity:**

1. **Describe and draw the relative atomic radii of Na, Mg, Al, Si, Cl.**
2. **Compare and contrast: K, Gr and Ba.** (Be sure to mention positioning in the periodic table, atomic radii, valences, ionisation and ionic radii)

**Home work is to revise and explore:** [**http://www.rsc.org/periodic-table**](http://www.rsc.org/periodic-table)

**Use this to write up study notes using success criteria as a guide**

1. What is electronegativity?
2. Write the trend of electronegativity seen on the Periodic table?
3. Why does it increase up and right?
4. Which elements do we disregard for this trend and why?
5. What is ionisation energy?
6. Bonus Q: What are the units for energy?
7. The electromagnetic force that attracts electrons to the nucleus drops off the further away it is. Q: The further away from the nucleus that an electron is the\_\_\_\_\_\_\_\_\_\_\_\_ it is to remove.
8. Write the ionisation energy trend seen on the Periodic table:

**Extra Notes:**

**NB: Atoms like to have their outer most shell completely full**