

# 5 • What Do Atoms Look Like?

## ATOMIC SIZE

Here is some data about the sizes of atoms. Graph *Period 2's* data on the graph below.

In a *different color*, graph *Period 3's* data on the graph below.

	1	2	13	14	15	16	17	18
1	H 30	Atomic Radii						He -----
2	Li 123	Be 89	B 88	C 77	N 70	O 66	F 64	Ne -----
3	Na 157	Mg 136	Al 125	Si 117	P 110	S 104	Cl 99	Ar -----
4	K 203	Ca 174	Ga 125	Ge 122	As 121	Se 117	Br 114	Kr -----
5	Rb 216	Sr 192	In 150	Sn 140	Sb 141	Te 137	I 133	Xe -----
6	Cs 235	Ba 198	Tl 155	Pb 154	Bi 152	Po 153	At -----	Rn -----

Note: Mark the vertical axis from 0 – 160 (by 20's)

### Trend in Atomic Size Across the Periodic Table

Li Na	Be Mg	B Al	C Si	N P	O S	F Cl

### Horizontal Trend

What is the trend in atomic size as you go *across* the periodic table? \_\_\_\_\_

This is true because there are more \_\_\_\_\_ (protons / electrons / layers of electrons) pulling the electron cloud in toward the nucleus.

### Vertical Trend

Examine the sizes of the Group 1 elements (H, Li, Na, K, Rb, Cs). What is the trend in atomic size as you go *down* a column of the periodic table? \_\_\_\_\_

This is true because there are more \_\_\_\_\_ (protons / electrons / layers of electrons) making the electron cloud larger.