

Student Name: _____ Pd. _____ Date: _____

Activity
Periodic Trends

Use the attached data sheet and some of the provided graph paper to generate graphs of the following periodic trends versus atomic number (which should be on the x-axis). Use the long edge of the paper for atomic number, and stop at **atomic number 36 (Kr)**.

On each graph, use the same scale for atomic number so that the sheets, when superimposed, will correctly overlay the trends. Use whatever scale is reasonable for the y axis, and don't forget axis labels and a graph title for each.

For atomic/ionic radius, graph each as separate lines on the same page in different colors, to make the difference distinct. Rulers and colored pencils are provided.

Create graphs for these trends:

1. Atomic/Ionic radius
2. First Ionization Potential
3. Atomic Weights
4. Electronegativity

Z	Symbol	Atomic Weight	Atomic Radius	Ionic Radius	Ionization Potential	EN
1	H	1.0079	0.79	0.012	13.5984	2.2
2	He	4.0026	0.49		24.5874	
3	Li	6.941	2.05	0.76	5.3917	0.98
4	Be	9.0122	1.4	0.35	9.3227	1.57
5	B	10.811	1.17	0.23	8.298	2.04
6	C	12.0107	0.91		11.2603	2.55
7	N	14.0067	0.75	0.13	14.5341	3.04
8	O	15.9994	0.65	1.4	13.6181	3.44
9	F	18.9984	0.57	1.33	17.4228	4
10	Ne	20.1797	0.51		21.5645	
11	Na	22.9897	2.23	1.02	5.1391	0.93
12	Mg	24.305	1.72	0.72	7.6462	1.31
13	Al	26.9815	1.82	0.535	5.9858	1.61
14	Si	28.0855	1.46	0.4	8.1517	1.9
15	P	30.9738	1.23	0.38	10.4867	2.19
16	S	32.065	1.09	0.37	10.36	2.58
17	Cl	35.453	0.97	1.81	12.9676	3.16
18	Ar	39.948	0.88		15.7596	
19	K	39.0983	2.77	1.38	4.3407	0.82
20	Ca	40.078	2.23	0.99	6.1132	1
21	Sc	44.9559	2.09	0.745	6.5615	1.36
22	Ti	47.867	2	0.605	6.8281	1.54
23	V	50.9415	1.92	0.59	6.7462	1.63
24	Cr	51.9961	1.85	0.52	6.7665	1.66
25	Mn	54.938	1.79	0.46	7.434	1.55
26	Fe	55.845	1.72	0.645	7.9024	1.83
27	Co	58.9332	1.67	0.745	7.881	1.88
28	Ni	58.6934	1.62	0.69	7.6398	1.91
29	Cu	63.546	1.57	0.73	7.7264	1.9
30	Zn	65.39	1.53	0.74	9.3942	1.65
31	Ga	69.723	1.81	0.62	5.9993	1.81
32	Ge	72.64	1.52	0.53	7.8994	2.01
33	As	74.9216	1.33	0.58	9.7886	2.18
34	Se	78.96	1.22	0.5	9.7524	2.55
35	Br	79.904	1.12	1.96	11.8138	2.96
36	Kr	83.8	1.03		13.9996	