FLINN SCIENTIFIC

Name_____

Plotting Trends Worksheet

Atomic Number	Element	Value of Physical Property	Straw Length (calculated)	Straw Length* (cut)
1	H			
2	He			
3	Li			
4	Be			
5	B			
6	C			
7	N			
8	O			
9	F			
10	Ne			
11	Na			
12	Mg			
13	Al			
14	Si			
15	P			
16	S			
17	Cl			
18	Ar			
19	K			
20	Ca			
31	Ga			
32	Ge			
33	As			
34	Se			
35	Br			
36	Kr			
37	Rb			
38	Sr			
49	In			
50	Sn			
51	Sb			
52	Te			
53	I			
54	Xe			

Plotting Trends

Representative Element Data

Period	Symbol	Atomic Number	Atomic Mass (amu)	Density (g/cm^3)	Ionization Energy (kJ/mole)	Electro-negativity	Atomic Radius (pm)	Melting Point (K)
1	H	1	1.01	0.0001	1312	2.20	32	13.4
	He	2	4.00	0.0002	2372		31	0.95
2	Li	3	6.94	0.54	520	0.98	152	454
	Be	4	9.01	1.85	899	1.57	112	1560
	B	5	10.81	2.46	801	2.04	85	2349
	C	6	12.01	2.27	1086	2.55	77.2	4188
	N	7	14.01	0.0013	1402	3.04	70	63
	O	8	16.00	0.0014	1314	3.50	73	55
	F	9	19.00	0.0017	1681	3.98	72	54
	Ne	10	20.18	0.0009	2081		71	24
3	Na	11	22.99	0.968	496	0.93	186	371
	Mg	12	24.31	1.74	738	1.31	160	923
	Al	13	26.98	2.70	578	1.61	143	934
	Si	14	28.09	2.33	786	1.90	118	1685
	P	15	30.97	1.82	1012	2.19	110	317
	S	16	32.07	1.92	1000	2.58	103	380
	Cl	17	35.45	0.0032	1251	3.16	100	172
	Ar	18	39.95	0.0018	1521		98	84
4	K	19	39.10	0.856	419	0.82	227	336
	Ca	20	40.08	1.55	590	1.00	197	1115
	Ga	31	69.72	5.90	579	1.81	135	303
	Ge	32	72.61	5.32	762	2.01	122	1211
	As	33	74.92	5.73	947	2.18	120	1090
	Se	34	78.96	4.82	941	2.55	119	450
	Br	35	79.90	3.10	1140	2.96	114	266
	Kr	36	83.80	0.0037	1351	3.00	112	116
5	Rb	37	85.47	1.53	403	0.82	248	312
	Sr	38	87.62	2.63	550	0.95	215	1030
	In	49	114.82	7.31	558	1.78	167	430
	Sn	50	118.71	7.31	709	1.96	141	505
	Sb	51	121.75	6.70	834	2.05	140	904
	Te	52	127.60	6.24	869	2.10	142	723
	I	53	126.90	4.66	1008	2.66	133	387
	Xe	54	131.29	0.0059	1170	2.60	131	161

Plotting Trends

Periodic Placement of the Elements