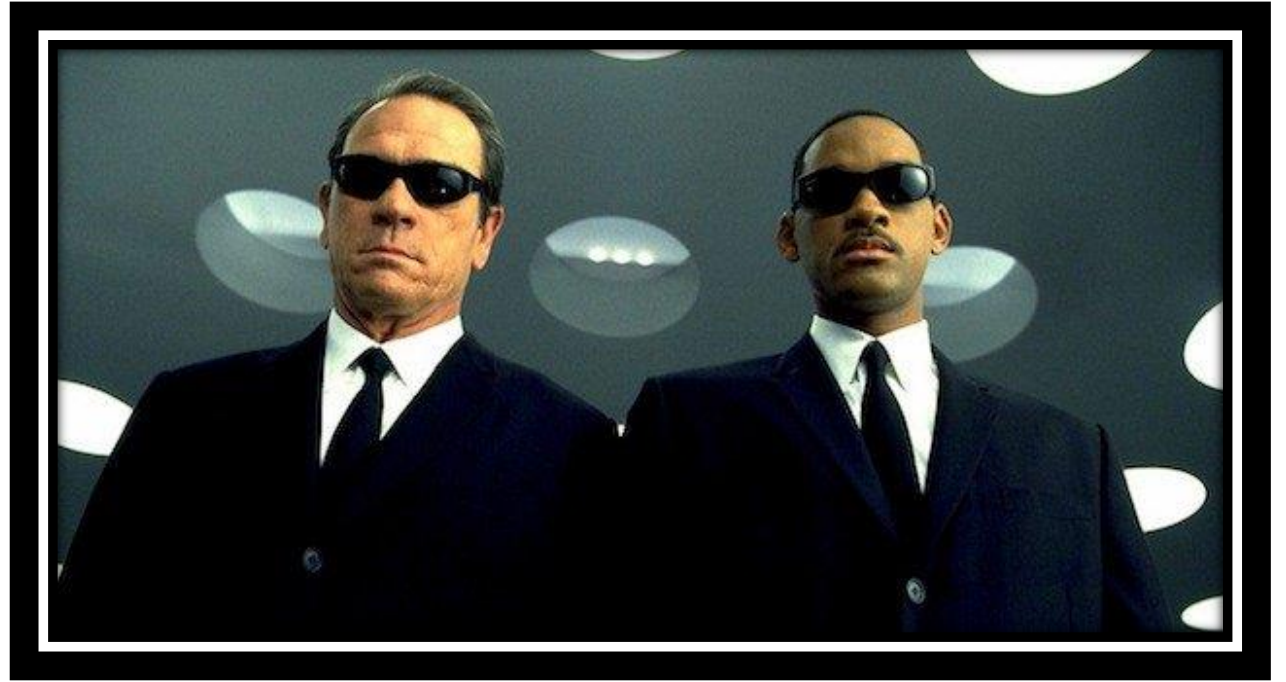


# Periodic Table of Aliens!



# Goals

- Organize pictures of aliens in an organized way
- Leave blank spots for two missing aliens.
- Find the two missing aliens
- Identify a potential NEXT alien that would exist if you expanded your table to be even bigger



# How?

- **Arrange your table into GROUPS and PERIODS**
  - It should make a rectangle!
- **Leave blank spots for the two missing aliens**
- **Every GROUP should have:**
  - Something that is the same as you go down.
  - Something that changes in a predictable way as you go down.
- **Every PERIOD should have:**
  - Something that is the same as you go across.
  - Something that changes in a predictable way as you go across.

	?				
				?	

Next Alien?  
Next Alien?  
Next Alien?  
Next Alien?  
Next Alien?

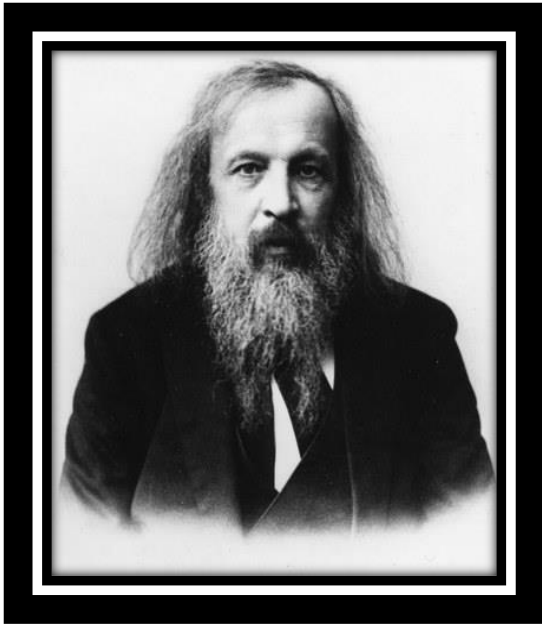
Next Alien? Next Alien? Next Alien? Next Alien? Next Alien? Next Alien?

Identify BOTH missing Aliens. Describe/draw each.

Pick ONE "Next Alien" to predict and describe/draw

# Why?

- Dmitri Mendeleev tried to organize the elements in a table (1860's)
  - Based on PROPERTIES



Ueber die Beziehungen der Eigenschaften zu den Atomgewichten der Elemente. Von D. Mendelejeff. — Ordnet man Elemente nach zunehmenden Atomgewichten in verticale Reihen so, dass die Horizontalreihen analoge Elemente enthalten, wieder nach zunehmendem Atomgewicht geordnet, so erhält man folgende Zusammenstellung, aus der sich einige allgemeinere Folgerungen ableiten lassen.

		Ti = 50	Zr = 90	? = 180
		V = 51	Nb = 94	Ta = 182
		Cr = 52	Mo = 96	W = 186
		Mn = 55	Rh = 104,4	Pt = 197,4
		Fe = 56	Ru = 104,4	Ir = 198
	Ni = 59	Co = 59	Pd = 106,6	Os = 199
H = 1		Cu = 63,4	Ag = 108	Hg = 200
Be = 9,4	Mg = 24	Zn = 65,2	Cd = 112	
B = 11	Al = 27,4	? = 68	Ur = 116	Au = 197?
C = 12	Si = 28	? = 70	Sn = 118	
N = 14	P = 31	As = 75	Sb = 122	Bi = 210?
O = 16	S = 32	Se = 79,4	Te = 128?	
F = 19	Cl = 35,5	Br = 80	J = 127	
Li = 7	Na = 23	Rb = 85,4	Cs = 133	Tl = 204
		Sr = 87,6	Ba = 137	Pb = 207
		Ca = 40		
		? = 45	Ce = 92	
		?Er = 56	La = 94	
		?Yt = 60	Di = 95	
		?In = 75,6	Th = 118?	

1. Die nach der Größe des Atomgewichts geordneten Elemente zeigen eine stufenweise Abänderung in den Eigenschaften.
2. Chemisch-analoge Elemente haben entweder übereinstimmende Atomgewichte (Pt, Ir, Os), oder letztere nehmen gleichviel zu (K, Rb, Cs).
3. Das Anordnen nach den Atomgewichten entspricht der *Werthigkeit* der Elemente und bis zu einem gewissen Grade der Verschiedenheit im chemischen Verhalten, z. B. Li, Be, B, C, N, O, F.
4. Die in der Natur verbreitetsten Elemente haben *kleine* Atomgewichte

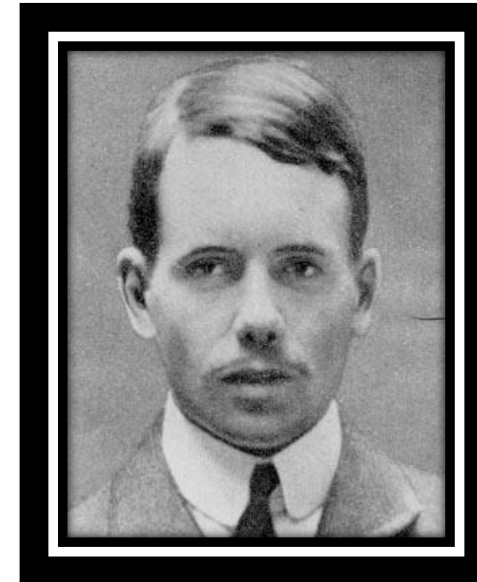
- He left blank spots for places he felt an element was missing
  - Elements that hadn't been discovered yet!

# Why?

- Mendeleev got SO close!
  - His predictions were really close!

	<u>"Eka-silicon"</u> <i>Prediction</i>	<u>Germanium</u> <i>Actual</i>	
Date Predicted	1871	Date Discovered	1886
Atomic Mass	72	Atomic Mass	72.6
Density	5.5 g/cm <sup>3</sup>	Density	5.47 g/cm <sup>3</sup>
Bonding Power	4	Bonding Power	4
Color	Dark Gray	Color	Grayish White

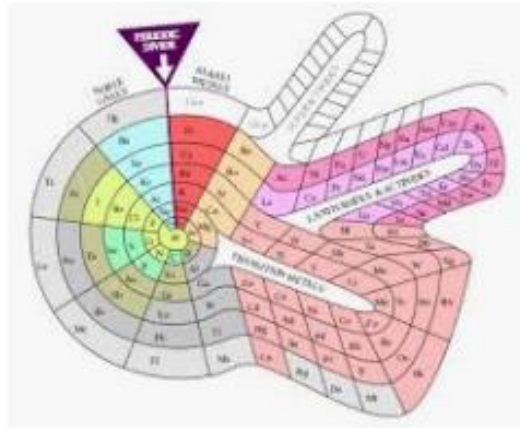
- Henry Mosely (1914)
  - Realized it should be organized by NUMBER OF PROTONS!
  - That fixed some of the problems with Mendeleev's table.



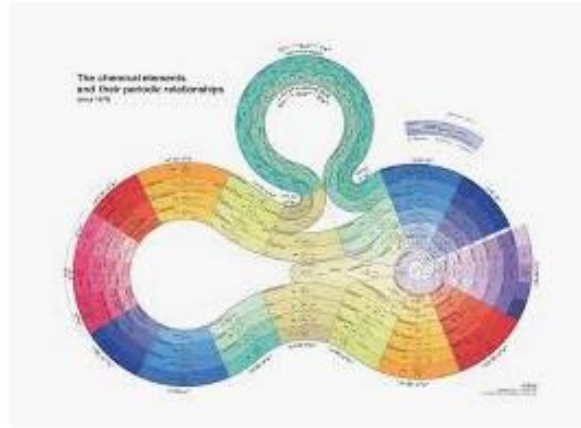
# Why?

- **A periodic table is nothing more than someone's idea of how to arrange the elements.**
  - There are lots of ways to do it!
- **You could make a periodic table of anything!**
  - Today you will arrange some aliens in **A PERIODIC** way
- **This chapter is all about patterns**
  - Today gives me an idea of who struggles with patterns

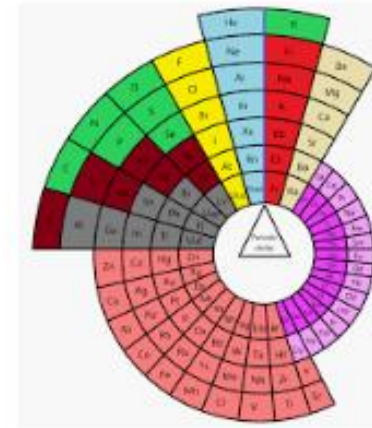
# Why?



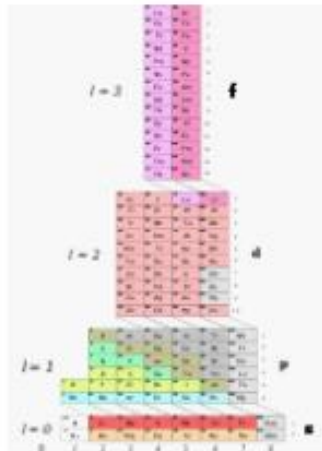
Alternative periodic tables - Wikipedia  
en.wikipedia.org



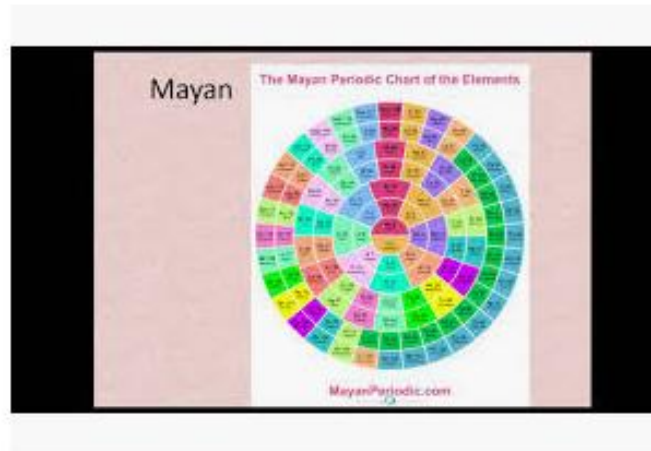
Alternative periodic tables ...  
easternblot.net



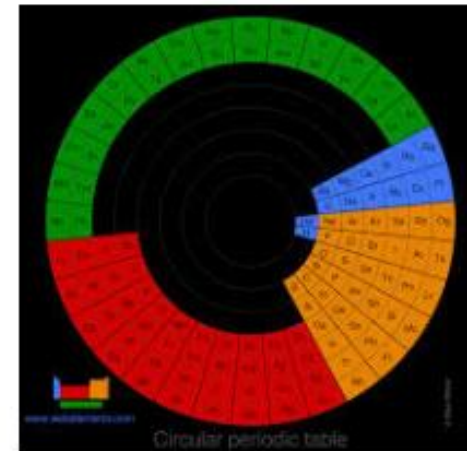
Alternative periodic tables - ...  
wikiwand.com



Alternative periodic tab...  
en.wikipedia.org



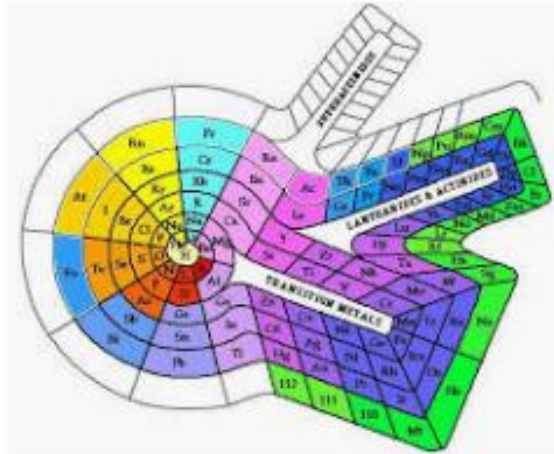
Alternative Periodic Tables - YouTube  
youtube.com



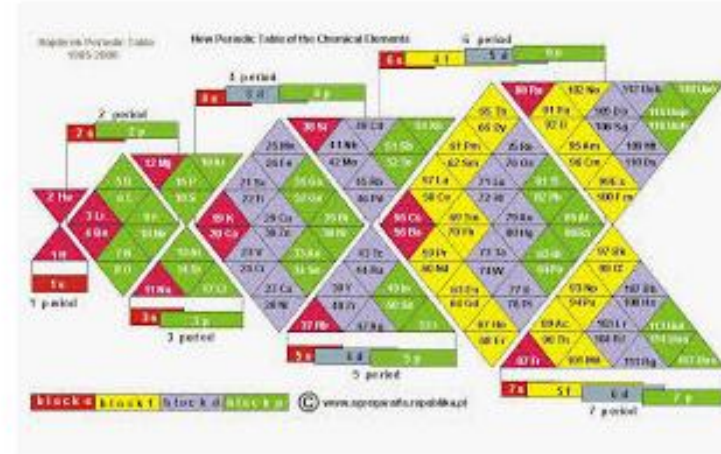
The periodic table of the elements ...  
webelements.com



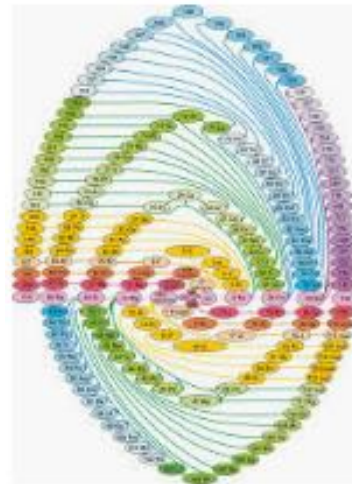
# Why?



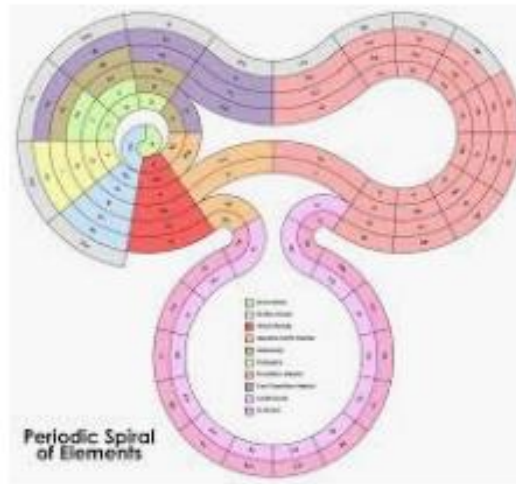
Alternative Periodic Tables (Updated ...  
chemistry-blog.com



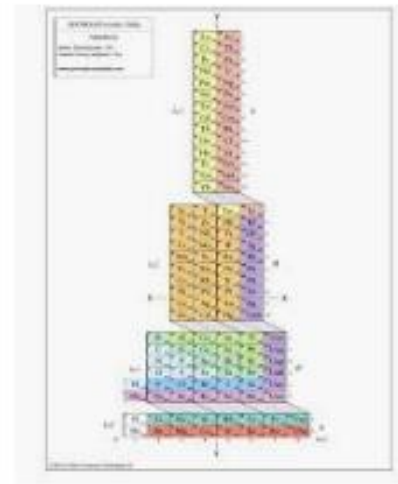
Alternative Periodic Tables (Updated ...  
chemistry-blog.com



Makayev Alexander 1 s...  
pinterest.com



Alternative Periodic Table » ChartGee...  
chartgeek.com

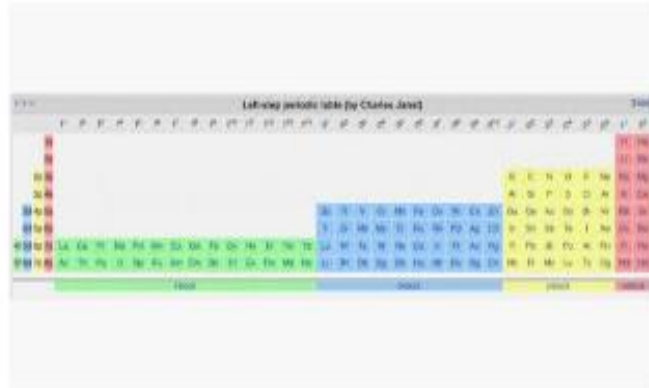


Alternative Periodic Tables (...  
chemistry-blog.com

# Why?



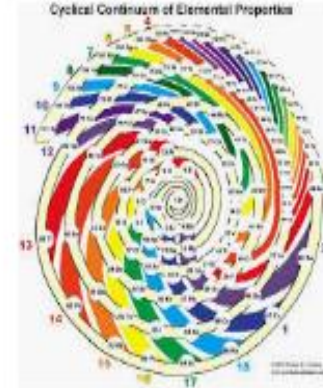
Alternative Periodic Tabl...  
teepublic.com



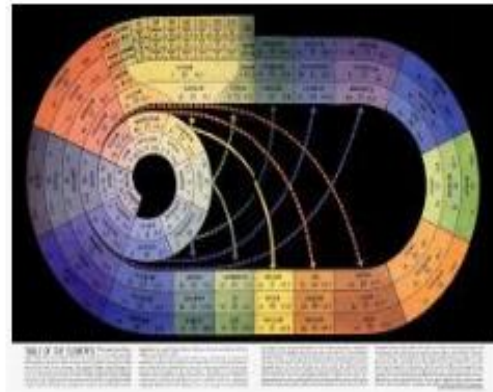
Alternative periodic tables ...  
easternblot.net



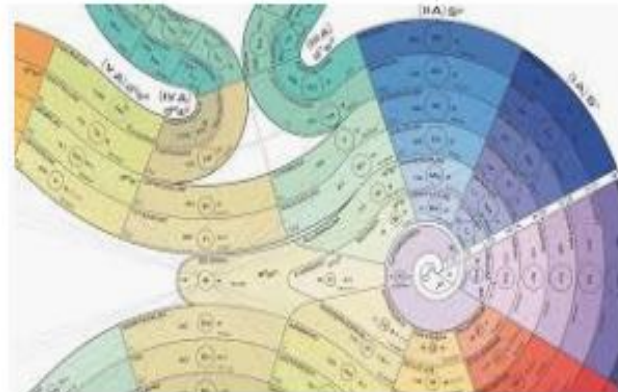
Alternative Periodic Ta...  
usefulcharts.com



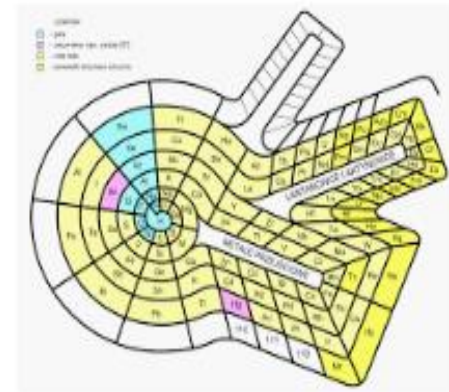
Alternative Periodic Tabl...  
pinterest.com



beautiful alternative periodic table ...  
furniture.com



I love alternative periodic tables ...  
artstation.com



Alternative periodic tables ...  
artstation.com



Al...  
artstation.com

# **Crash Course - Periodic Table**

- <https://youtu.be/0RRVV4Diomg>