

# Alice in Stretch & SqueezeLand: 5 Classifications

August 12, 2012

# Chapter Abstract

Alice in  
Stretch &  
SqueezeLand:  
5  
Classifications

Chapter  
Summary-01

Classification-  
01

Classification-  
02

Scientists have a primal need to classify things.

Chemists do this.

Physicists do this.

Now Nonlinear Dynamicists can do this.

# We Like to be Organized

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## PERIODIC TABLE OF THE ELEMENTS

<http://www.kj-soft.com/periodic/en/>

PERIOD	GROUP																18 VIIIA			
	1 IA	2 IIA		3-10 IIIB-VIIB										11 IB	12 IIB	13 IIIA		14 IVA	15 VA	16 VIA
1	<b>H</b> 1.0079 HYDROGEN															<b>He</b> 4.0026 HELIUM				
2	<b>Li</b> 6.941 LITHIUM	<b>Be</b> 9.0122 BERYLLIUM													<b>B</b> 10.811 BORON	<b>C</b> 12.011 CARBON	<b>N</b> 14.007 NITROGEN	<b>O</b> 15.999 OXYGEN	<b>F</b> 18.998 FLUORINE	<b>Ne</b> 20.180 NEON
3	<b>Na</b> 22.990 SODIUM	<b>Mg</b> 24.305 MAGNESIUM													<b>Al</b> 26.982 ALUMINUM	<b>Si</b> 28.086 SILICON	<b>P</b> 30.974 PHOSPHORUS	<b>S</b> 32.065 SULFUR	<b>Cl</b> 35.453 CHLORINE	<b>Ar</b> 39.948 ARGON
4	<b>K</b> 39.098 POTASSIUM	<b>Ca</b> 40.078 CALCIUM	<b>Sc</b> 44.956 SCANDIUM	<b>Ti</b> 47.867 TITANIUM	<b>V</b> 50.942 VANADIUM	<b>Cr</b> 51.996 CHROMIUM	<b>Mn</b> 54.938 MANGANESE	<b>Fe</b> 55.845 IRON	<b>Co</b> 58.933 COBALT	<b>Ni</b> 58.693 NICKEL	<b>Cu</b> 63.546 COPPER	<b>Zn</b> 65.38 ZINC	<b>Ga</b> 69.723 GALLIUM	<b>Ge</b> 72.64 GERMANIUM	<b>As</b> 74.922 ARSENIC	<b>Se</b> 78.96 SELENIUM	<b>Br</b> 79.904 BROMINE	<b>Kr</b> 83.80 KRYPTON		
5	<b>Rb</b> 85.468 RUBIDIUM	<b>Sr</b> 87.62 STRONTIUM	<b>Y</b> 88.906 YTRIUM	<b>Zr</b> 91.224 ZIRCONIUM	<b>Nb</b> 92.906 NIOBIUM	<b>Mo</b> 95.94 MOLYBDENUM	<b>Tc</b> (98) TECHNETIUM	<b>Ru</b> 101.07 RUTHENIUM	<b>Rh</b> 102.91 RHODIUM	<b>Pd</b> 106.42 PALLADIUM	<b>Ag</b> 107.87 SILVER	<b>Cd</b> 112.41 CADMIUM	<b>In</b> 114.82 INDIUM	<b>Sn</b> 118.71 TIN	<b>Sb</b> 121.76 ANTIMONY	<b>Te</b> 127.60 TELLURIUM	<b>I</b> 126.90 IODINE	<b>Xe</b> 131.29 XENON		
6	<b>Cs</b> 132.91 CAESIUM	<b>Ba</b> 137.33 BARIUM	57-71 <b>La-Lu</b> Lanthanide		<b>Hf</b> 178.49 HAFNIUM	<b>Ta</b> 180.96 TANTALUM	<b>W</b> 183.84 TUNGSTEN	<b>Re</b> 186.21 RHENIUM	<b>Os</b> 190.23 OSMIUM	<b>Ir</b> 192.22 IRIDIUM	<b>Pt</b> 195.08 PLATINUM	<b>Au</b> 196.97 GOLD	<b>Hg</b> 200.59 MERCURY	<b>Tl</b> 204.38 THALLIUM	<b>Pb</b> 207.2 LEAD	<b>Bi</b> 208.98 BISMUTH	<b>Po</b> (209) POLONIUM	<b>At</b> (210) ASTATINE	<b>Rn</b> (222) RADON	
7	<b>Fr</b> 223 FRANCIUM	<b>Ra</b> 226 RADIUM	89-103 <b>Ac-Lr</b> Actinide		<b>Rf</b> 261 RUTHERFORDIUM	<b>Db</b> 262 DUBNIUM	<b>Sg</b> 263 SEABORGIUM	<b>Bh</b> 264 BOHRNIUM	<b>Hs</b> 265 HASSIUM	<b>Mt</b> 266 MEITNERIUM	<b>Uun</b> 267 UNUNUNIUM	<b>Uuu</b> 268 UNUNVIUM	<b>Uub</b> 269 UNUNVIUM	<b>Uuq</b> 270 UNUNQUADIUM						

**RELATIVE ATOMIC MASS(1)**

**GROUP IUPAC**

**GROUP CAS**

**ATOMIC NUMBER**

**SYMBOL**

**ELEMENT NAME**

**Legend:**

- Metal
- Semimetal
- Nonmetal
- Alkali metal
- Alkaline earth metal
- Transition metals
- Lanthanide
- Actinide
- Chalcogens element
- Halogens element
- Noble gas

**STANDARD STATE (100 °C; 101 kPa)**

- Ne - gm
- Fe - solid
- Ga - liquid
- Tr - synthetic

**LANTHANIDE**

57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	71.97
<b>La</b>	<b>Ce</b>	<b>Pr</b>	<b>Nd</b>	<b>Pm</b>	<b>Sm</b>	<b>Eu</b>	<b>Gd</b>	<b>Tb</b>	<b>Dy</b>	<b>Ho</b>	<b>Er</b>	<b>Tm</b>	<b>Yb</b>	<b>Lu</b>	
LANTHANUM	CERENTIUM	PRASEODYMIUM	NEODYMIUM	PROMETHIUM	SAMARIUM	EUROPIUM	GADOLINIUM	TERBIUM	DYSPROSIUM	HOLMIUM	ERBIUM	THULIUM	YTTERIUM	LUTETIUM	

**ACTINIDE**

89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	262
<b>Ac</b>	<b>Th</b>	<b>Pa</b>	<b>U</b>	<b>Np</b>	<b>Pu</b>	<b>Am</b>	<b>Cm</b>	<b>Bk</b>	<b>Cf</b>	<b>Es</b>	<b>Fm</b>	<b>Md</b>	<b>No</b>	<b>Lr</b>	
ACTINIUM	THORIUM	PROTACTINIUM	URANIUM	NEPTUNIUM	PLUTONIUM	AMERICIUM	CURSIUM	BERKELIUM	GALFORSIUM	ENSTENIUM	FERMIUM	MEDELSIUM	NOBELIUM	LAWRENCIUM	

(1) Pure Appl. Chem., 73, No. 4, 667-683 (2001)  
Relative atomic mass is shown with five significant figures. For elements with no stable nuclides, the value enclosed in brackets indicates the mass number of the longest-lived isotope of the element.  
However three such elements (Tm, Pu, and U) do have a characteristic terrestrial isotopic composition, and for these an atomic weight is tabulated.

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*Experimental Chart of Nuclides 2000*  
2975 isotopes

