

# Introduction to the Periodic Table

Atomic Number • Symbol • Atomic Weight

Element • Compound • Mixture

# What is the PERIODIC TABLE?

- o Shows all known elements in the universe.
- o Organizes the elements by chemical properties.



6	7
<b>C</b> Carbon 12.011	<b>N</b> Nitrogen 14.006
2.4	2.5
14	15
<b>Si</b>	

# How do you read the PERIODIC TABLE?

6
<b>C</b>
Carbon
12.01

— Atomic  
number

— Symbol

— Name

— Atomic  
Weight

# What is the **ATOMIC NUMBER**?

6
<b>C</b>
Carbon
12.01

— Atomic  
number

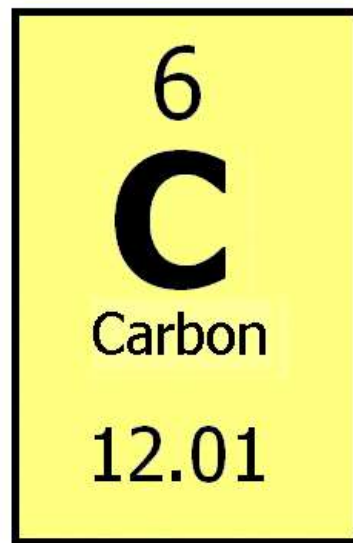
o The number of protons found in the nucleus of an atom

Or

o The number of electrons surrounding the nucleus of an atom.

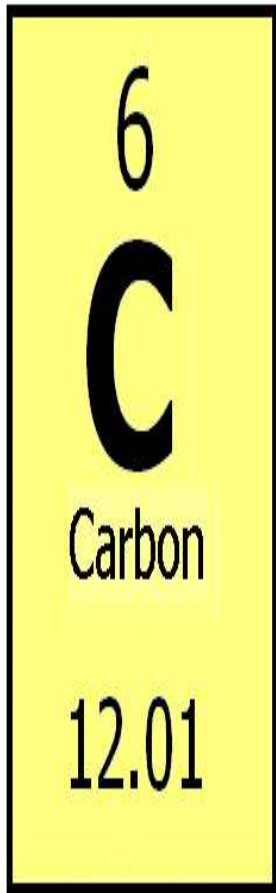
# What is the **SYMBOL**?

- o An abbreviation of the element name.



— Symbol

# What is the **ATOMIC WEIGHT**?



— Atomic  
Weight

- o The number of protons and neutrons in the nucleus of an atom.

How do I find the number of protons, electrons, and neutrons in an element using the periodic table?

o # of PROTONS = ATOMIC NUMBER

o # of ELECTRONS = ATOMIC NUMBER

o # of NEUTRONS = ATOMIC WEIGHT - ATOMIC NUMBER

**Now you are almost as smart as I  
am! I am Dmitri Mendeleev!**



**But not as handsome!  
Man, I look GOOD!**



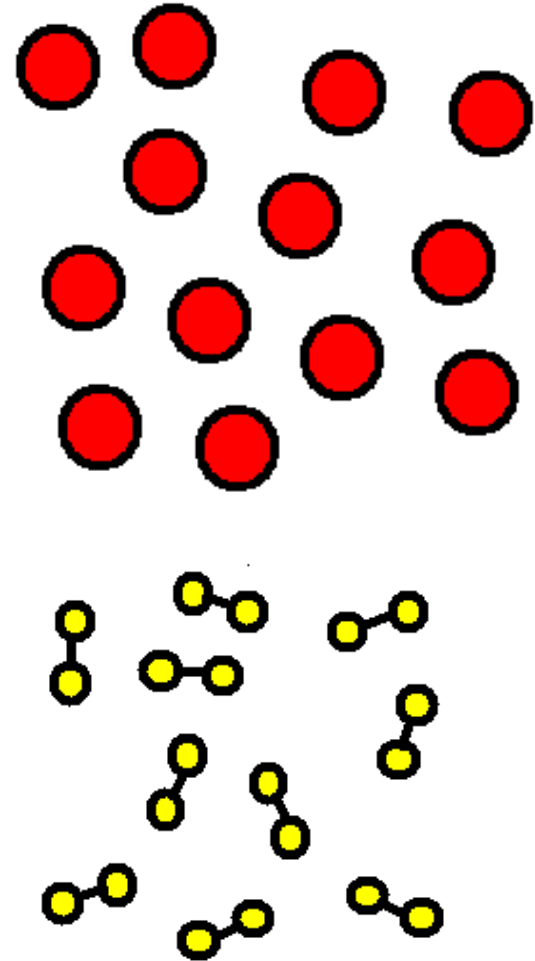
# Elements, Compounds, and Mixtures

A hand-drawn periodic table of elements. The elements are arranged in rows and columns, with each cell containing the element's symbol. The cells are colored in various colors: pink, yellow, light blue, light green, and light purple. The colors appear to be grouped by groups or periods. The elements are: H, He, Li, Be, B, C, N, O, F, Ne, Na, Mg, Al, Si, P, S, Cl, Ar, K, Ca, Sc, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Ga, Ge, As, Se, Br, Kr, Rb, Sr, Y, Zr, Nb, Mo, Tc, Ru, Rh, Pd, Ag, Cd, In, Sn, Sb, Te, I, Xe, Cs, Ba, La, Hf, Ta, W, Re, Os, Ir, Pt, Au, Hg, Tl, Pb, Bi, Po, At, Rn.

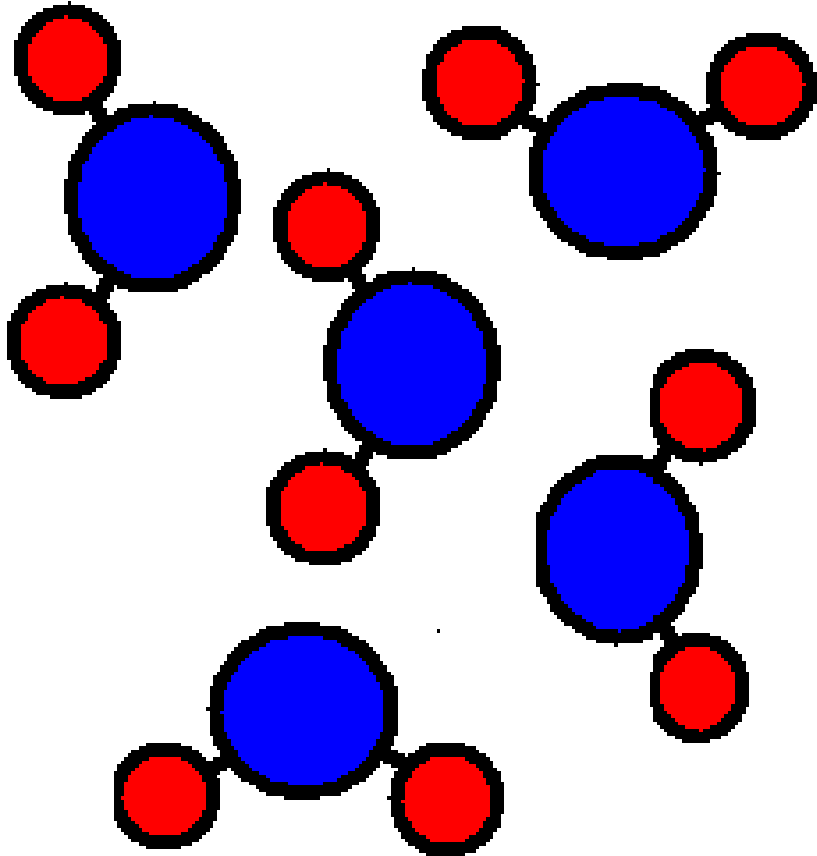
H																		He
Li	Be											B	C	N	O	F		Ne
Na	Mg											Al	Si	P	S	Cl		Ar
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br		Kr
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I		Xe
Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At		Rn

# What is an ELEMENT?

- o A substance composed of a single kind of atom.
- o Cannot be broken down into another substance by chemical or physical means.



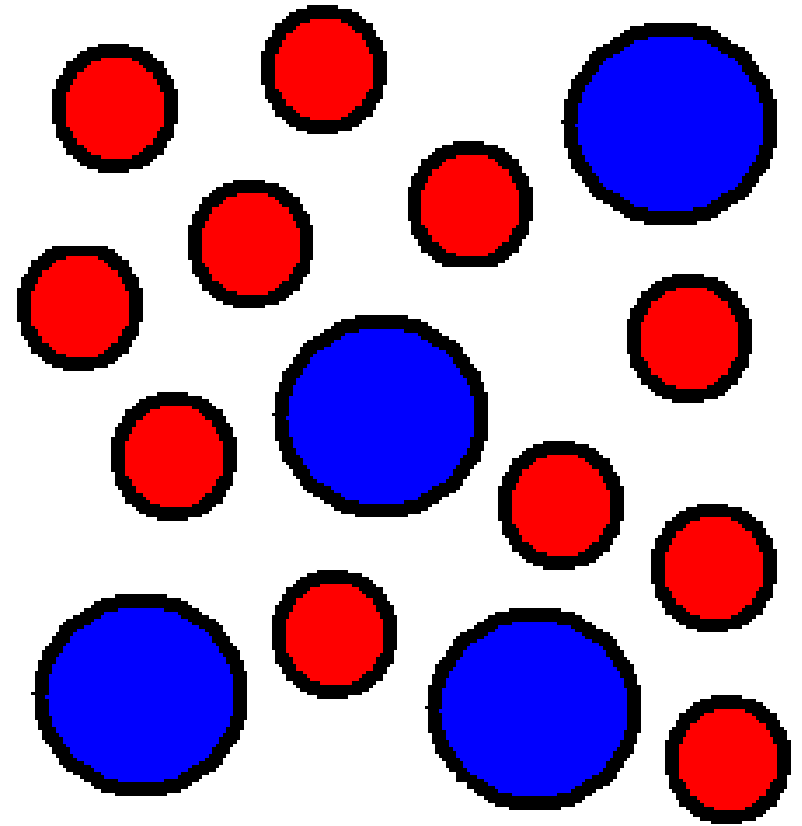
# What is a **COMPOUND**?



- o A substance in which two or more different elements are **CHEMICALLY** bonded together.

# What is a MIXTURE?

- o Two or more substances that are mixed together but are NOT chemically bonded.



# Element, Compound or Mixture?

