Name: _____ Block: _____

6.2 Elements and Compounds

(Read pages 140 – 143 and fill in blanks)

How long have people known about pure substances?

People have investigated pure substances for _____. Example: Ten thousand years ago, people learned to extract _____by heating the ore.

What have people discovered about pure substances?

They discovered that some pure substances can be _____ into other pure substances _____.

For this reason pure substances are classified into two types: _____, and _____.

Elements

Are _____ that _____ be broken down into any other pure substance. There are only about _____ elements in the world.

How many kinds of particles make up an element?

Elements are composed of _____ _____.
For instance, aluminum foil is composed of only _____.

Compounds

Are pure substances that are _____ _____**.** They can be solids, _____, or gases.

Ex. _____ is a compound that is made up of _____ particles and _____ particles. Every particle of water is the _____.

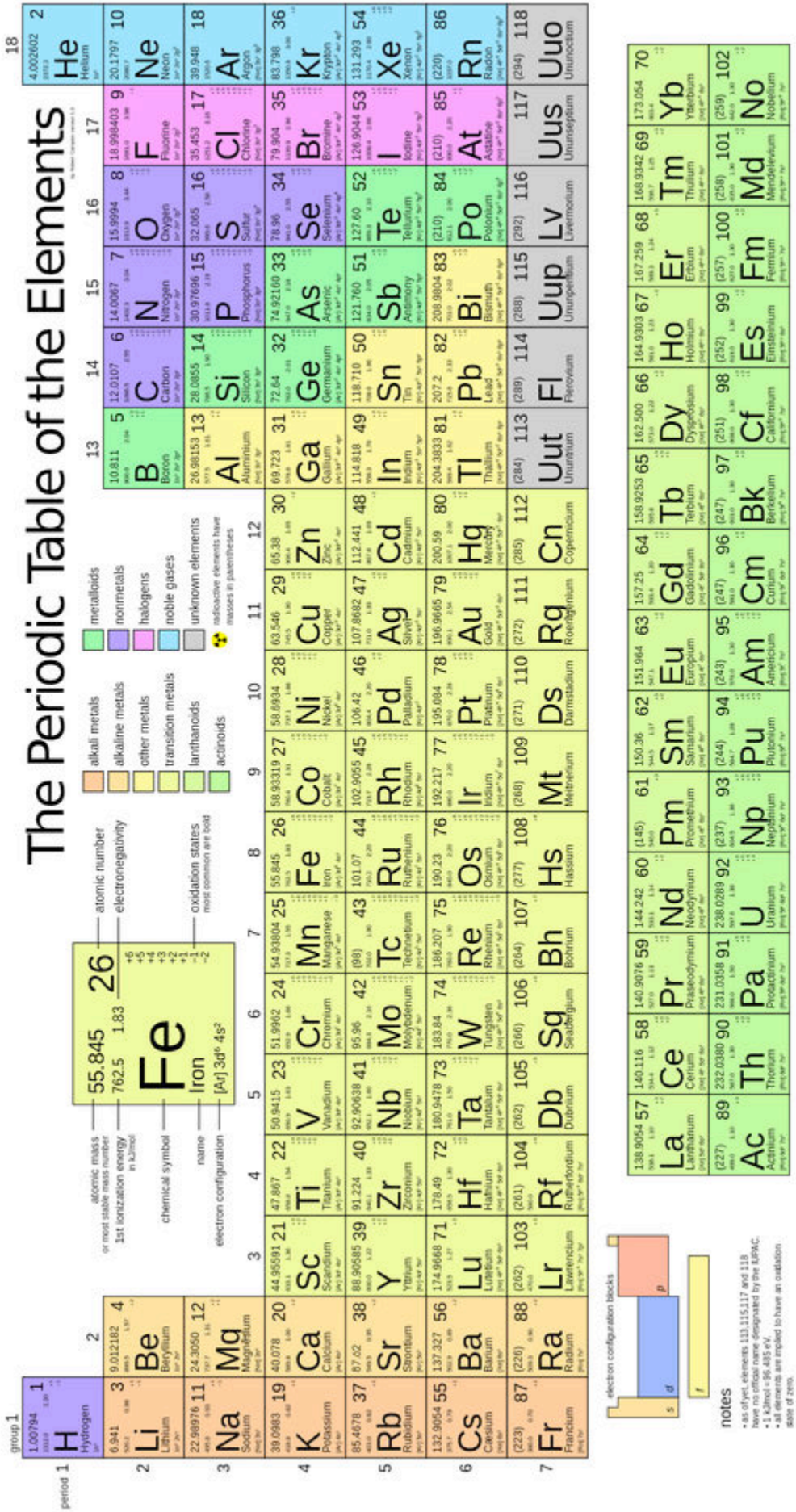
USE TABLE 1 to list the elements combined to make the following compounds:

Baking soda - _____
Table Salt - _____
Carbon Dioxide - _____
Chalk - _____

Do compounds have the same properties as their elements?

_____! The properties of compounds can be very _____ from the properties of the _____.
_____ and _____ are fatal on their own, but combined they make _____, which you can eat.

Name: _____ Block: _____


The Periodic Table of the Elements
alkali metals
alkaline metals
other metals
transition metals
lanthanoids
actinoids
metalloids
nonmetals
halogens
noble gases
unknown elements
radioactive elements have masses in parentheses
atomic number
electronegativity
oxidation states
most common are bold
atomic mass
or most stable mass number
1st ionization energy in kJ/mol
chemical symbol
name
electron configuration
55.845
762.5
1.83
26
Fe
Iron
[Ar] 3d⁶ 4s²
group 1
period 1
electron configuration blocks
s
d
p
f
notes
• as of yet, elements 113,115,117 and 118 have no official name designated by the IUPAC.
• 1 kJ/mol = 96.485 eV.
• all elements are implied to have an oxidation state of zero.