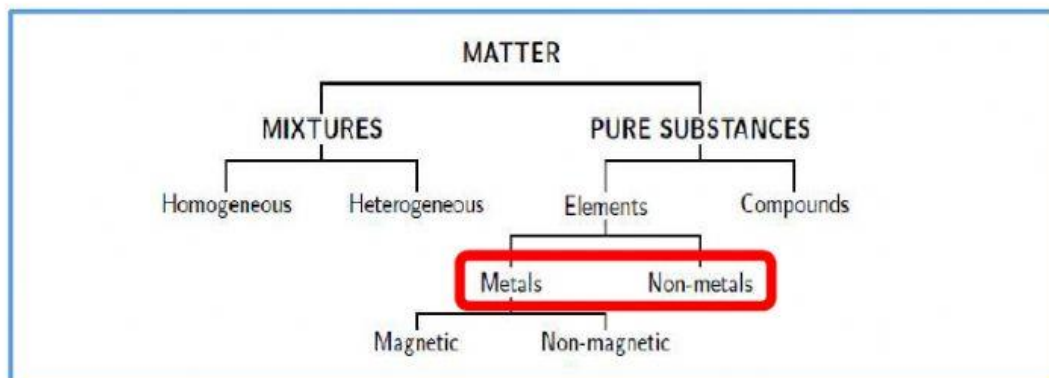


MATTER AND MATERIALS – Worksheet 2



Label the Periodic Table below to show which part contains Metals and which part contains Non-metals:

TABEL 3: DIE PERIODIEKE TABEL VAN ELEMENTE																	
TABLE 3: THE PERIODIC TABLE OF ELEMENTS																	
I		SLEUTEL / KEY														0	
1 H 1,008																	2 He 4,003
3 Li 6,941	4 Be 9,012	Atoomgetal	29	Atomic number	5 B 10,81	6 C 12,01	7 N 14,01	8 O 16,00	9 F 19,00	10 Ne 20,18							
11 Na 22,99	12 Mg 24,31	Simbool	Cu	Symbol	13 Al 26,98	14 Si 28,09	15 P 30,97	16 S 32,07	17 Cl 35,45	18 Ar 39,95							
		Relatiewe atoommassa	63,55	Relative atomic mass	31 Ga 69,72	32 Ge 72,59	33 As 74,92	34 Se 78,96	35 Br 79,90	36 Kr 83,80							
19 K 39,10	20 Ca 40,08	21 Sc 44,96	22 Ti 47,88	23 V 50,94	24 Cr 52,00	25 Mn 54,94	26 Fe 55,85	27 Co 58,93	28 Ni 58,69	29 Cu 63,55	30 Zn 65,39	31 Ga 69,72	32 Ge 72,59	33 As 74,92	34 Se 78,96	35 Br 79,90	36 Kr 83,80
37 Rb 85,47	38 Sr 87,62	39 Y 88,91	40 Zr 91,22	41 Nb 92,21	42 Mo 95,94	43 Tc	44 Ru 101,1	45 Rh 102,9	46 Pd 106,4	47 Ag 107,9	48 Cd 112,4	49 In 114,8	50 Sn 118,7	51 Sb 121,8	52 Te 127,6	53 I 126,9	54 Xe 131,3
55 Cs 132,9	56 Ba 137,3	57 La 138,9	72 Hf 178,5	73 Ta 180,9	74 W 183,9	75 Re 186,2	76 Os 190,2	77 Ir 192,2	78 Pt 195,1	79 Au 197,0	80 Hg 200,6	81 Tl 204,4	82 Pb 207,2	83 Bi 209,0	84 Po	85 At	86 Rn
87 Fr	88 Ra 226,1	89 Ac															
			58 Ce 140,1	59 Pr 140,9	60 Nd 144,2	61 Pm	62 Sm 150,4	63 Eu 152,0	64 Gd 157,3	65 Tb 158,9	66 Dy 162,5	67 Ho 164,9	68 Er 167,3	69 Tm 168,9	70 Yb 173,0	71 Lu 175,0	
			90 Th 232,0	91 Pa	92 U 238,0	93 Np	94 Pu	95 Am	96 Cm	97 Bk	98 Cf	99 Es	100 Fm	101 Md	102 No	103 Lr	

Properties of Metals and Non-metals:

Drag each of the properties below into the relevant column.

Don't have lustre (dull)
Low boiling point
Good electrical insulators
Have lustre (shiny)
Poor thermal conductors
High melting point

Conduct heat
Not ductile
Brittle
Ductile
Conduct electricity
Malleable

METALS	NON-METALS

Which properties of metal make it useful for:

a) **electrical wires** (there may be more than one correct answer)

Dull	Conduct heat
Low boiling point	Not ductile
Good electrical insulators	Brittle
Shiny	Ductile
Poor thermal conductors	Conduct electricity
High melting point	Malleable

b) **cooking pots and utensils**

Dull	Conduct heat
Low boiling point	Not ductile
Good electrical insulators	Brittle
Shiny	Ductile
Poor thermal conductors	Conduct electricity
High melting point	Malleable

c) **jewellery**

Dull	Conduct heat
Low boiling point	Not ductile
Good electrical insulators	Brittle
Shiny	Ductile
Poor thermal conductors	Conduct electricity
High melting point	Malleable

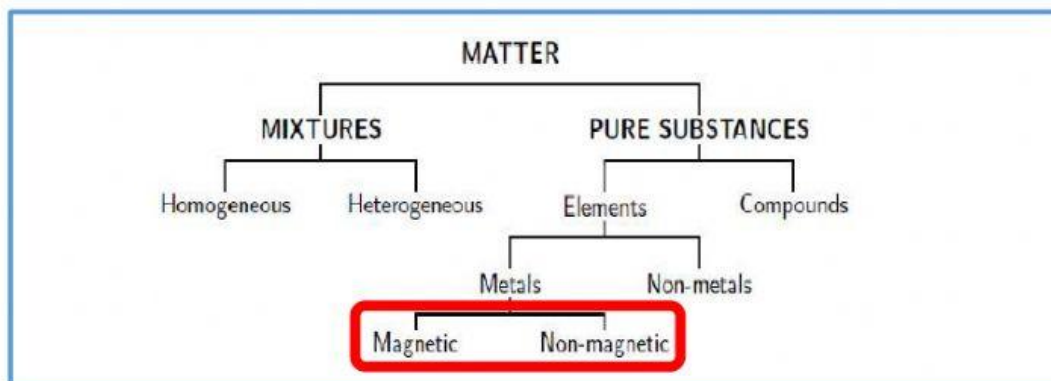
Semi-metals or metalloids are substances that have both metal and non-metal properties. The symbols of the metalloids on the periodic table are:

B, , , , , , , , ,

Metalloids are semi-conductors, but unlike with metals, their conductivity as their temperature .

Elements can also be classified into 3 groups according to their **conductivity**. Draw lines to link the correct items in the table below:

Conductors	Non-metals
Semi-conductors	Metals
Insulators	Semi-metals / Metalloids



is one of the phenomena by which materials exert attractive or repulsive forces on other materials.

Examples of ferromagnetic elements (naturally attracted to magnets and can easily be made into a magnet):