

Periodic Table (S2 Chemistry)

1 H 1.008																	18 He 4.0026
3 Li 6.94	4 Be 9.0122											5 B 10.81	6 C 12.011	7 N 14.007	8 O 15.999	9 F 18.998	10 Ne 20.180
11 Na 22.990	12 Mg 24.305	3	4	5	6	7	8	9	10	11	12	13 Al 26.982	14 Si 28.085	15 P 30.974	16 S 32.06	17 Cl 35.45	18 Ar 39.948
19 K 39.098	20 Ca 40.078	21 Sc 44.956	22 Ti 47.867	23 V 50.942	24 Cr 51.996	25 Mn 54.938	26 Fe 55.845	27 Co 58.933	28 Ni 58.693	29 Cu 63.546	30 Zn 65.38	31 Ga 69.723	32 Ge 72.630	33 As 74.922	34 Se 78.97	35 Br 79.904	36 Kr 83.798
37 Rb 85.468	38 Sr 87.62	39 Y 88.906	40 Zr 91.224	41 Nb 92.906	42 Mo 95.95	43 Tc (98)	44 Ru 101.07	45 Rh 102.91	46 Pd 106.42	47 Ag 107.87	48 Cd 112.41	49 In 114.82	50 Sn 118.71	51 Sb 121.76	52 Te 127.60	53 I 126.90	54 Xe 131.29
55 Cs 132.91	56 Ba 137.33	57-71 *	72 Hf 178.49	73 Ta 180.95	74 W 183.84	75 Re 186.21	76 Os 190.23	77 Ir 192.22	78 Pt 195.08	79 Au 196.97	80 Hg 200.59	81 Tl 204.38	82 Pb 207.2	83 Bi 208.98	84 Po (209)	85 At (210)	86 Rn (222)
87 Fr (223)	88 Ra (226)	89-103 #	104 Rf (265)	105 Db (268)	106 Sg (271)	107 Bh (270)	108 Hs (277)	109 Mt (276)	110 Ds (281)	111 Rg (280)	112 Cn (285)	113 Nh (286)	114 Fl (289)	115 Mc (289)	116 Lv (293)	117 Ts (294)	118 Og (294)

* Lanthanide series

57 La 138.91	58 Ce 140.12	59 Pr 140.91	60 Nd 144.24	61 Pm (145)	62 Sm 150.36	63 Eu 151.96	64 Gd 157.25	65 Tb 158.93	66 Dy 162.50	67 Ho 164.93	68 Er 167.26	69 Tm 168.93	70 Yb 173.05	71 Lu 174.97
---------------------------	---------------------------	---------------------------	---------------------------	--------------------------	---------------------------	---------------------------	---------------------------	---------------------------	---------------------------	---------------------------	---------------------------	---------------------------	---------------------------	---------------------------

Actinide series

89 Ac (227)	90 Th 232.04	91 Pa 231.04	92 U 238.03	93 Np (237)	94 Pu (244)	95 Am (243)	96 Cm (247)	97 Bk (247)	98 Cf (251)	99 Es (252)	100 Fm (257)	101 Md (258)	102 No (259)	103 Lr (262)
--------------------------	---------------------------	---------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	---------------------------	---------------------------	---------------------------	---------------------------

Homework Pack

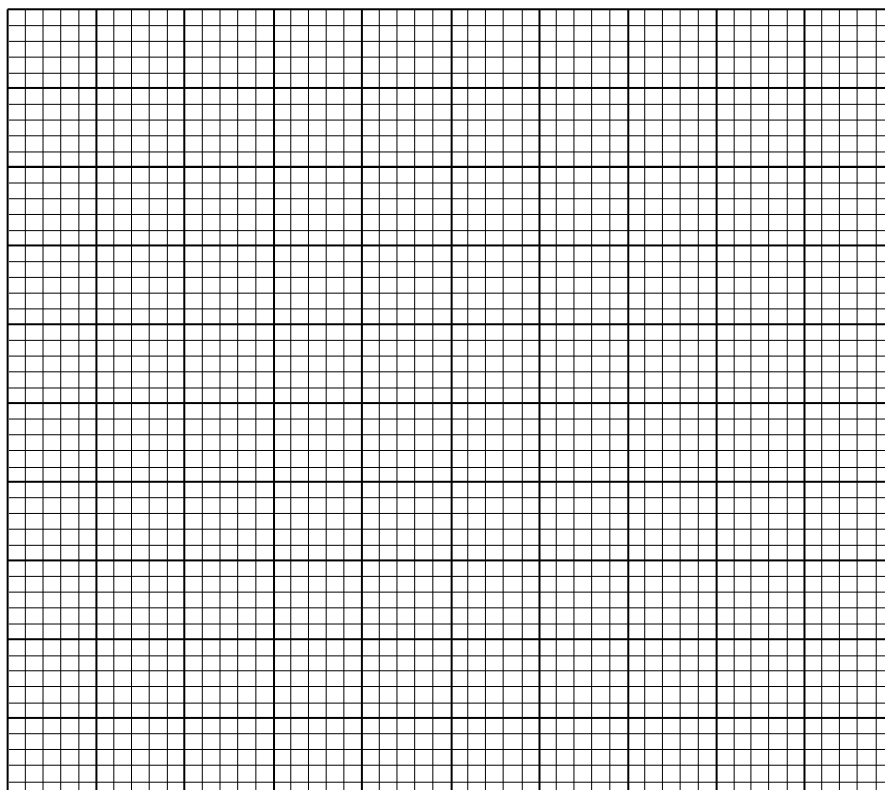
Name: _____ Class: _____

Teacher: _____

Homework 1: Elements

1. Use the information below to draw a bar graph of the common elements present in humans against the percentage of each element - **use most of the graph paper.**

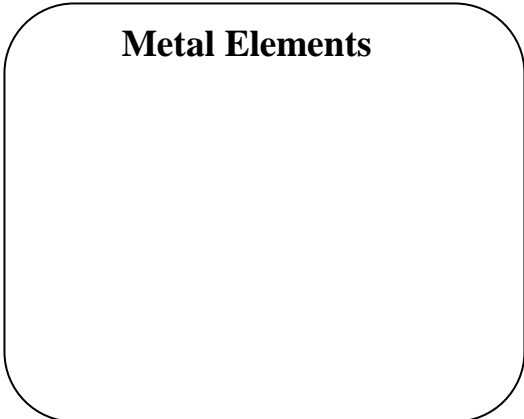
Element	% Present
Carbon	18
Hydrogen	10
Oxygen	65
Nitrogen	3
Other	?



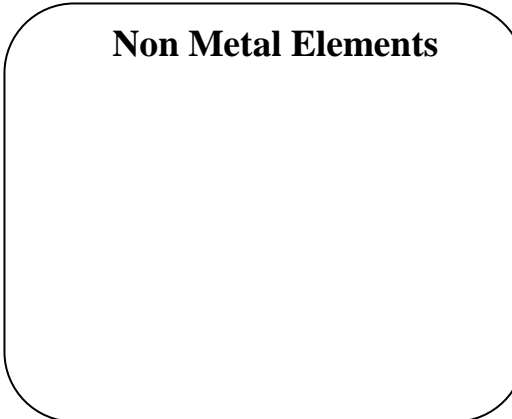
2. Sort these elements into two groups - metals and non metals

copper carbon oxygen sulfur iron gold
zinc nitrogen neon sodium aluminium

Metal Elements



Non Metal Elements



3. The elements listed below all have important uses:
iron; copper; helium; aluminium; argon; gold; mercury.

Complete the table by:

- inserting the elements above beside their correct use.
- explaining which property the element has that makes it useful.

Element	Use of element	Property of the element
	for making boilers	
	for filling light bulbs	
	for weather balloons	
	for filling thermometers	
	for making aircraft	
	for making bridges/cars	
	for making jewellery	

(b) Which of the metals is a transition metal? _____.

Homework 2: The Periodic Table

1. Use your periodic table (there is one in your planner!) to complete the table below.

Element	Symbol	Group Number	Atomic Number
calcium	Ca	2	20
lead			
	O		
potassium			
			12
	He		
			7
	C		
copper		Transition Metal	
	Fr		
	Ag		
			15

2. (a) Which group of elements are the alkali metals? _____.
- (b) Which group of elements are called the halogens? _____.
- (c) In which group would you find the Noble gases? _____.
- (d) Where are the transition metals found? _____.
3. (a) Why are the alkali metals stored under oil? _____
- _____.
- (b) Give a use for the Noble gases _____.

Homework 3: Chemical reactions and word equations

1. (a) What are the reactants in a chemical reaction? _____

_____.

(b) What are the products in a chemical reaction? _____

_____.

(c) What is always made during chemical reactions? _____

_____.

2. Identify the reactants and products in each of the following descriptions:

(a) A pupil was studying the rate at which **hydrogen** was produced in the reaction between **zinc** and **hydrochloric acid**. The other product of the reaction was **zinc chloride**.

Reactants = _____.

Products = _____.

(b) Methane burns in oxygen to make carbon dioxide and water.

Reactants = _____.

Products = _____.

(c) Calcium chloride and water are made when calcium hydroxide and hydrochloric acid react together.

Reactants = _____.

Products = _____.

(d) Ethanol is made when water is added to ethene.

Reactants = _____.

Products = _____.

(e) Write word equations for reactions (a) and (d) above in the spaces below.

(a) _____.

(d) _____.

Homework 4: Elements and Compounds

1. Match the correct word to the correct definition using arrows.

Word
mixture
element
compound
Pure

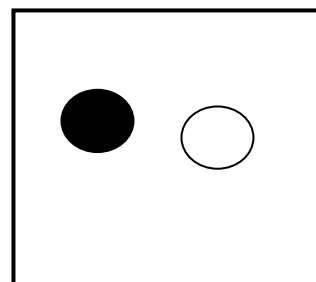
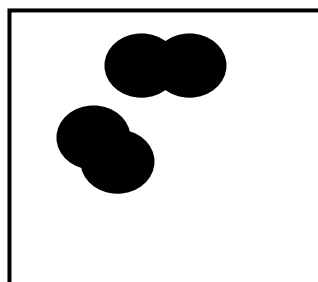
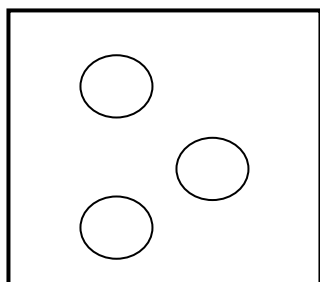
Definition
a substance that cannot be broken down and contains only one type of atom
Two or more substances which are not joined together
a substance that contains two or more different types of atom joined together
A substance that contains only one substance

2. Beside each box write down whether it is a **mixture** or **not mixture**. Also write down whether the box contains an **element** or a **compound**.

A _____

B _____

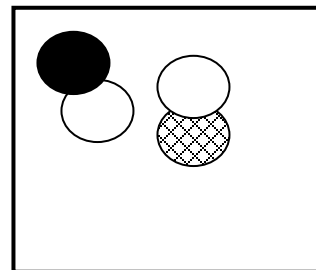
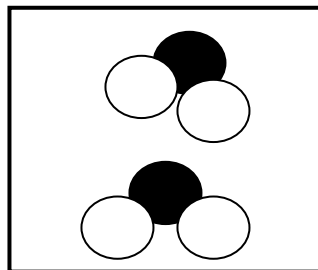
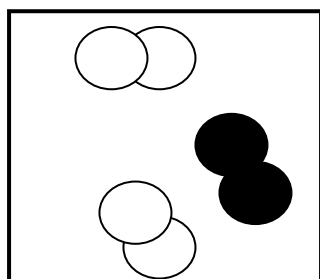
C _____



D _____

E _____

F _____



3. Complete the following table.

Compound name	Elements present
aluminium oxide	
magnesium chloride	
carbon dioxide	
potassium bromide	
barium iodide	barium, iodine
lithium oxide	
sodium chloride	
boron iodide	
hydrogen fluoride	
hydrogen oxide	
calcium fluoride	
strontium bromide	

Homework 5: Breaking Down Compounds

1. Explain why it is not easy to break up a compound into its elements.

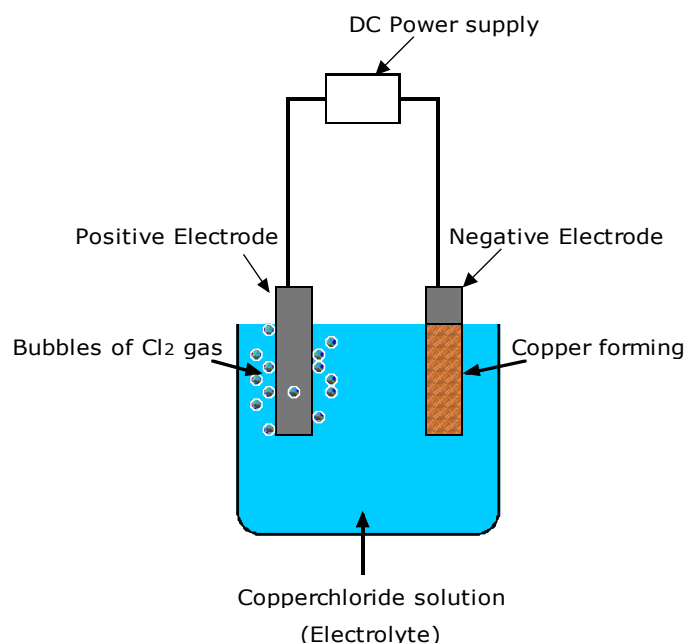
2. During electrolysis what is used to separate a compound back into its elements?

3. A pupil passed electricity through a solution of copper chloride using the equipment shown opposite.

- (a) Name the compound being broken up.

- (b) Name the elements being formed?

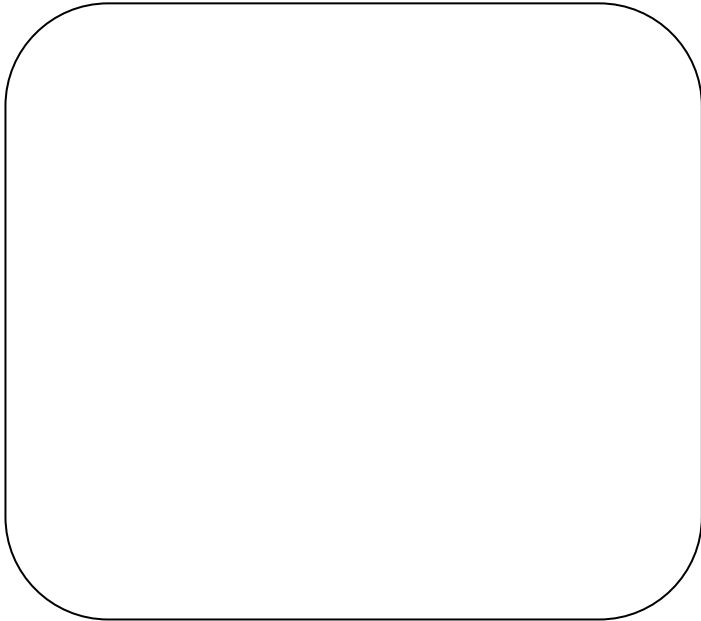
- (c) Write a word equation for this reaction.



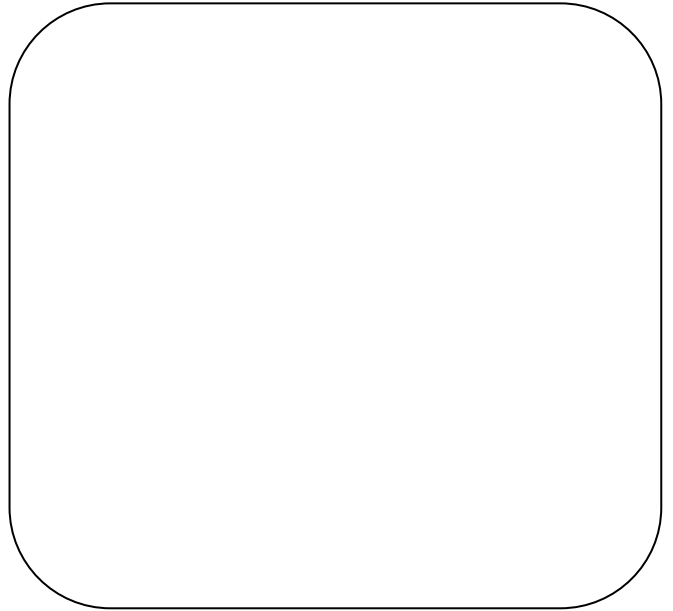
Homework 6: Separating Mixtures

Using the three boxes below describe using labelled diagrams how you would separate a mixture of sand salt and rocks

Dissolving



Filtration



Evaporation

