



3055 BA SANGAM COLLEGE

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WORKSHEET 8

School: Ba Sangam College

Year/level: 10

Subject: Basic Science

NAME: _____

Strand	Matter
Sub Strand	Investigating Matter
Content Learning Outcome	Investigate the structure of an atom and explain the properties of common elements in relation to their position on the periodic table.

Lesson Notes – *The Periodic Table*

PERIODIC TABLE OF THE ELEMENTS																		VIIIA
IA		IIB	IVB	VB	VIB	VIIIB	VIII			IB	IIB	IIIA	IVA	VA	VIA	VIIA		2
1	H											5	6	7	8	9	10	He
1.0079												10.811	12.011	14.007	15.999	18.998	20.180	4.0026
3	Li	4										13	14	15	16	17	18	
6.941		Be										Al	Si	P	S	Cl	Ar	
11		12										26.982	28.086	30.974	32.065	35.453	39.948	
22.990	Na	Mg										31	32	33	34	35	36	
39.098		20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
		40.078	44.956	47.867	50.942	51.996	54.938	55.845	58.933	58.693	63.546	65.39	69.723	72.64	74.922	78.96	79.904	83.80

- ❖ **Periodic table** – an arrangement of the elements in order of their atomic numbers.
- ❖ **Period** – a **horizontal row** of elements in the periodic table
 - There are 7 periods e.g. Period 1 elements: H and He
Period 2 elements: Li, Be, B, C, N, O, F and Ne.
 - The atomic number increases by one from one element to the next when moving from left to right across a period.
 - All elements have the same number of electron shells except the outer shell has one more electron than the previous one.
- ❖ **Groups** – a **vertical column** of elements in the periodic table.
 - Groups are numbered using Roman numerals one (I) – eight (VIII) except transition metals. E.g Group I elements: H, Li, Na and K.(first column of periodic table)
 - Elements in the **same group** have the **same number of electrons** in their **outer shell** and so have **similar chemical properties**.
- ❖ Groups with alternative names.
 - Group I – Alkali Metals
 - Group II – Alkali earth Metals
 - Group VII – Halogens
 - Group VIII – Noble gases/Inert

Exercise

1. In the periodic table each row is called a _____. (1 mark)
2. The elements in each _____ have the same number of _____ . (1 mark)
3. Each column in the periodic table is called the _____. (1 mark)
4. Each of the elements in the same _____ have the same number of _____ in their outer shells. (2 marks)
5. Complete the table below.

Atomic Number	Electron Configuration	Symbol of Element	Group of Periodic Table
3			
12			

(3 marks)

6. Write down the name of the elements with the following symbols.

- i. B _____
- ii. C _____
- iii. N _____
- iv. O _____

(2 marks)

TOTAL:

