

Worksheet on Chemical Families

1. In what group are fluorine, chlorine, and iodine located? What is the name of this family?

Group 17 Halogen

2. What are the most un-reactive and most stable atoms in the periodic table called? In what group are they located?

Group 18 Noble Gas

3. Do the metallic elements display metallic or nonmetallic properties? What are the group numbers of these elements?

Both Groups 13-16

4. Is oxygen an example of a metal, nonmetal, or metalloid? In what group is oxygen located?

Non metal # 16

5. In what group are the alkaline earth elements located? Name two of these elements.

Group 2 Beryllium, Mg, Ca, Strontium

6. What is the family name of the elements in Group 1? Name two of these elements.

Alkali metals Lithium, Na, K, Rb

7. How similar might you expect the chemical properties of gallium and indium to be? Explain.

Al - very similar

8. Hydrogen is placed at the top of which group of elements?

Alkali Metals

Use the following terms to match with questions 9 - 16. Answers may be used more than once.

A) noble gases

D) halogens

B) transition elements

E) alkaline earth metals

C) alkali metals

E 9. These achieve the electron configurations of noble gases by losing two electrons.

B 10. These vary in the number of electrons in the highest energy level.

D 11. These achieve the electron configurations of noble gases by gaining one electron.

C 12. These have a single electron in the highest energy level.

A 13. These are stable and un-reactive.

D 14. These are highly reactive and readily form salts with metals.

E 15. These are metals that are more reactive than the transition elements but less reactive than the alkali metals.

CIRCLE THE CORRECT ANSWER FOR QUESTIONS 17 - 29

17. Which element is more like lithium in terms of properties: sodium or beryllium?
18. Which element has more electrons in its outer energy level : sodium or magnesium?
19. Which element is closer to achieving noble gas configuration: magnesium or lithium?
20. Which element reacts more readily with fluorine: lithium or beryllium?
21. Which of the following metals is not an alkali metal?
 A) sodium B) potassium C) iron D) francium
22. Alkali metals must be stored under oil because of their extreme
 A) radioactivity B) reactivity C) softness D) brilliance
23. Which element will react more readily with chlorine: sodium or magnesium?
24. Because the alkali metals are very reactive, they are ___ found as pure metals in nature.
 A) sometimes on hot days may be B) never
 C) always D) may if the weather is cold enough be
25. There are no known compounds of
 A) xenon B) krypton C) helium, neon, and argon D) any of the noble gases
26. All the elements after ___ are synthetic elements.
 A) thorium B) lawrencium C) uranium D) plutonium
27. The most reactive element is
 A) bromine B) iodine C) fluorine D) chlorine

Fill in the following table.

Element	Group #	Period #	Metal, Nonmetal, Or nonmetal ?	Atomic Number	Symbol
Lithium	1	2	M	3	Li
Boron	13	2	Metallid	5	B
Carbon	14	2	Non	6	C
Nitrogen	15	2	Non	7	N
Oxygen	16	2	Non	8	O
Potassium	1	4	metal	19	K
Silicon	14	3	metallid	14	Si
Sulfur	16	3	Non	16	S