

Element Families in the Periodic Table

Objective

8.2.4 Give properties of 5 major families of the periodic table: Hydrogen, Alkali Metals, Alkaline earth Metals, Halogens, and Nobel gases

Instructions: Please read your text, pages 11-13. Please write your answers in black text, using Verdana 12 point normal style text.

1. Check The questions #1-4 on page 13. You do not need to answer them here but should be able to answer them on the summative assessment next week.
 2. _____ is usually considered separately from other groupings so it is identified as its own family.
 3. Describe 2 unique features of hydrogen.
 - a)
 - b)
 4. Use a straight edge to lightly outline a periodic table in the space below. You do not need to write in all the elements; just the outline.
 - a) Using dark lines, draw in the boundaries of the five major families.
 - b) Inside the boundaries, lightly write the symbols of elements that are in the family
 - c) Inside the boundary, turn your paper 90 degrees and write the name of the family darkly, sideways so that the family name takes up most of the box you drew.
5. Why do families in the periodic table share similar characteristics?

6. Are noble gases reactive? Explain the reason for their reactivity.

7. Identify two uses of noble gases.
 - a)
 - b)

8. Which halogen is the most reactive? Explain why.

9. Which alkali metal is the most reactive? Explain why.

10. Use a straight edge to lightly outline a periodic table in the space below. You do not need to write in all the elements; just the outline.
 - a) Using dark lines, draw in the boundaries of the five major families.
 - b) Inside the boundaries, turn the paper 90 degrees and lightly write the family name
 - c) Inside each family, draw a large arrow that shows the direction of increasing reactivity. The notched end of the arrow should be on the least reactive element and the "head" of the arrow should be on the most reactive element.

Objective: 8.2.7 Describe lithium, sodium and potassium in Group 1 as a collection of relatively soft metals showing a trend in melting point, density and in reaction with water

11. Using the internet, look up information on the melting point, density and reactivity with water of lithium, sodium and potassium.

a) What are the characteristics of metals; or what makes an element "metal."

b) Why are lithium, sodium and potassium called metals?

c) In the space below, draw three large, adjacent squares with the symbols for these elements inside as they would appear in the periodic table.

d) Outside the squares, describe the trends in melting point, density and reactivity to water using arrows to indicate increasing amount as you did above. Also describe the trends in writing alongside each arrow. Write the URLs for the sites you used to find information on the lines below (there is not a minimum number).
