

**SCH3U0 - Chemistry: The Periodic Table and Periodicity**

Answer each of the following questions.

- Who first published the classification of the elements that is the basis of our periodic table today?
- By what property did Mendeleev arrange the elements?
- By what property did Moseley suggest that the periodic table be arranged?
- What is the periodic law?
- What is a period?
- How many are there in the periodic table?
- What is a group (also called a family)?
- How many are there in the periodic table?
- State the number of valence electrons in an atom of:  
a. sulfur                      b. calcium                      c. chlorine                      d. arsenic
- Give the names and chemical symbols for the elements that correspond to these atomic numbers:  
a. 10                      b. 18                      c. 36                      d. 90
- List, by number, both the period and group of each of these elements.  

	<u>Symbol</u>	<u>Period</u>	<u>Group</u>
a. beryllium	Be		
b. iron	Fe		
c. lead	Pb		
- Which of the following pairs of elements belong to the same period?  
a. Na and Cl      b. Na and Li      c. Na and Cu      d. Na and Ne
- Which of the following pairs of elements belong to the same group?  
a. H and He      b. Li and Be      c. C and Pb      d. Ga and Ge
- How does an element's period number relate to the number of the energy level of its valence electrons?
- What are the transition elements?
- Would you expect strontium to be, chemically, more similar to calcium or rubidium and WHY?
- What is the heaviest noble gas?
- What is the heaviest alkaline earth metal?
- In going from top to bottom of any group, each element has \_\_\_\_\_ more occupied energy level(s) than the element above it.
- What are the Group 1 elements called?
- What are the Group 2 elements called?
- What are the Group 17 elements called?
- What are the Group 18 elements called?
- List the three lightest members of the noble gases.
- List all of the alkali metals.
- Which alkali metal belongs to the sixth period?