

### Periodic Table Trends 101 Video Review



1. List the trends in the periodic table we will be covering today.

- Number of
- Types of
- Location and properties of
- Phases

2. What are valence electrons? \_\_\_\_\_

3. How many valence electrons do the following elements have:

Be = \_\_\_\_\_ Cl = \_\_\_\_\_ Al = \_\_\_\_\_ Si = \_\_\_\_\_ S = \_\_\_\_\_ K = \_\_\_\_\_ Ne = \_\_\_\_\_  
He = \_\_\_\_\_ C = \_\_\_\_\_ F = \_\_\_\_\_ Ar = \_\_\_\_\_ Mg = \_\_\_\_\_ H = \_\_\_\_\_

4. How do elements get a positive charge? \_\_\_\_\_  
\_\_\_\_\_ These elements are called \_\_\_\_\_

5. How do elements get a negative charge? \_\_\_\_\_  
\_\_\_\_\_ These elements are called \_\_\_\_\_

6. What type of ion do the following elements form in a chemical bond:

Be = \_\_\_\_\_ Cl = \_\_\_\_\_ Al = \_\_\_\_\_ Si = \_\_\_\_\_ S = \_\_\_\_\_ K = \_\_\_\_\_ Ne = \_\_\_\_\_  
He = \_\_\_\_\_ C = \_\_\_\_\_ F = \_\_\_\_\_ Ar = \_\_\_\_\_ Mg = \_\_\_\_\_ H = \_\_\_\_\_

7. Why do elements in the 18<sup>th</sup> group have a charge of 0? \_\_\_\_\_  
\_\_\_\_\_

8. Most of the metals on the periodic table are located \_\_\_\_\_  
Most of the nonmetals on the periodic table are located \_\_\_\_\_  
except for \_\_\_\_\_. Metalloids are located \_\_\_\_\_

	State at room temperature	Appearance	Conductivity – ability to conduct electricity	Malleability – able to be bent out of shape without overheating Ductility – can be drawn into thin wires
<u>Metals</u>				
<u>Nonmetals</u>				
<u>Metalloids</u> <u>(Semi-conductors)</u>				

9. Most metals are \_\_\_\_\_ at room temperature except for \_\_\_\_\_ which is a \_\_\_\_\_ at room temperature. Most nonmetals are \_\_\_\_\_ at room temperature except for \_\_\_\_\_ which is a \_\_\_\_\_ at room temperature. All metalloids are \_\_\_\_\_ at room temperature.

**Check for Understanding – Use your notes and knowledge of Periodic Table trends to answer the following:**

1. What are valence electrons? \_\_\_\_\_ What do they help determine? \_\_\_\_\_
2. Give the number of valence electrons for the following elements:  
Ca = \_\_\_\_\_ O = \_\_\_\_\_ Ar = \_\_\_\_\_ C = \_\_\_\_\_ Na = \_\_\_\_\_ Al = \_\_\_\_\_ P = \_\_\_\_\_
3. What trend do you see in ionic charges as you go from left to right on the periodic table? \_\_\_\_\_
4. Elements that lose electrons have a \_\_\_\_\_ charge, while elements that gain electrons have a \_\_\_\_\_ charge.
5. What trend do you notice in metals, nonmetals, and metalloids as you move from left to right on the periodic table? \_\_\_\_\_ Most elements are \_\_\_\_\_, while the fewest are \_\_\_\_\_.
6. Compare and contrast the properties of metals and nonmetals. \_\_\_\_\_
7. What properties of metalloids often make them a mix between metals and nonmetals? \_\_\_\_\_
8. Most metals tend to be \_\_\_\_\_ at room temperature except for \_\_\_\_\_, while most nonmetals tend to be \_\_\_\_\_ at room temperature except for \_\_\_\_\_.

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