PERIODIC TABLE (PART II)

The next thing in our review is to classify the elements into three groups. These three groups are: metals, nonmetals, and inert gases. Let's look at where these groups are located on the periodic table and correlate them with the ability to lose and gain electrons.

First, the **metals**. They are found in the left, center and lower parts of the periodic table. The metals are good at losing electrons, but they are poor at gaining electrons. The net effect is that the metals tend to lose electrons.

Second, the **nonmetals**. They are found on the top and right side of the periodic table. They include hydrogen. The nonmetals are poor at losing electrons, but they are good at gaining electrons. They gain electrons better than they lose them. So the nonmetals can be characterized by their ability to gain electrons.

Third, the **inert gases**, or the noble gases, as they are sometimes called, are found in the far right column of the periodic table. Sometimes these are included with the nonmetals because they are not metals. However their behavior and properties are different enough from the other nonmetals that we will consider them as a separate classification. They are poor at both losing and gaining electrons. Therefore, for the most part, they neither gain nor lose electrons.

We can also consider a fourth classification, the **metalloids**. The transition from metallic properties and behavior to nonmetallic properties and behavior is not a simple matter of stepping over a line that can be drawn on the periodic table. In some ways germanium behaves like a nonmetal, and arsenic has some metallic properties. These elements along the dividing line between metals and nonmetals sometimes are put in their own classification of metalloids.

