**The Periodic Table: Metals, Nonmetals, and Metalloids**

Using the [periodic](http://www.dummies.com/how-to/content/the-periodic-table-metals-nonmetals-and-metalloids.html#glossary-periodic_table) [table](http://www.dummies.com/how-to/content/the-periodic-table-metals-nonmetals-and-metalloids.html#glossary-periodic_table), you can classify the elements in many ways. One useful way is by metals, nonmetals, and metalloids. Most of the elements on the periodic table are classified as metals.

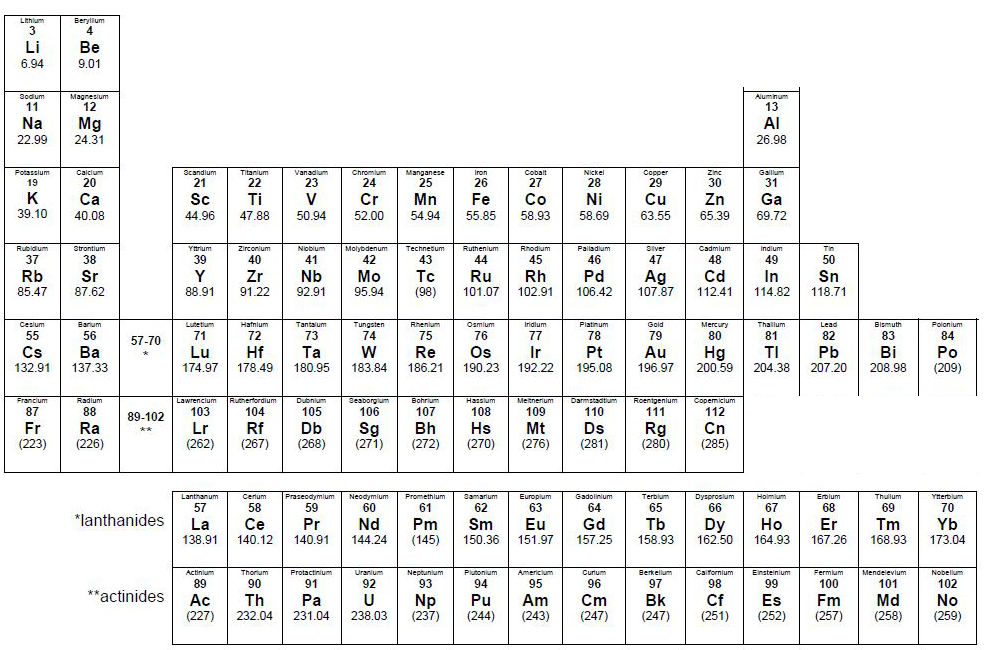
**Metals**

In the periodic table, you can see a stair-stepped line starting at Boron (B), [atomic](http://www.dummies.com/how-to/content/the-periodic-table-metals-nonmetals-and-metalloids.html#glossary-atomic_number) [number](http://www.dummies.com/how-to/content/the-periodic-table-metals-nonmetals-and-metalloids.html#glossary-atomic_number) 5, and going all the way down to Polonium (Po), atomic number 84. Except for Germanium (Ge) and Antimony (Sb), all the elements to the left of that line can be classified as *metals*.

These metals have properties that you normally associate with the metals you encounter in everyday life:

- They are solid (with the exception of mercury, Hg, a liquid).   
 - They are shiny, good conductors of electricity and heat.  
 - They are *ductile* (they can be drawn into thin wires).  
 - They are *malleable* (they can be easily hammered into very thin sheets).

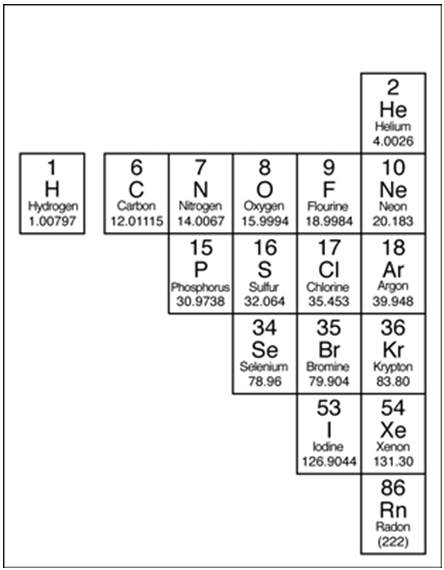
All these metals tend to lose electrons easily. The following figure shows the metals.



**Nonmetals**

Except for the elements that border the stair-stepped line, the elements to the right of the line are classified as *nonmetals* (along with hydrogen). Nonmetals have properties opposite those of the metals.

The nonmetals are brittle, not malleable or ductile, poor conductors of both heat and electricity, and tend to gain electrons in chemical reactions. Some nonmetals are liquids. These elements are shown in the following figure.



**Metalloids**

The elements that border the stair-stepped line are classified as *metalloids*. The metalloids, or*semimetals*, have properties that are somewhat of a cross between metals and nonmetals.

Metalloids tend to be economically important because of their unique conductivity properties (they only partially conduct electricity), which make them valuable in the semiconductor and computer chip industry. The metalloids are shown in the following illustration.

