Elements and Their Properties Summary

Metals

* a typical metal is a hard, shiny solid, due to metallic bonding, is malleable, ductile and a good conductor
* Groups 1 and 2 are the alkali and alkaline earth metals, which have some similar and some contrasting properties
* The lanthanides and actinides have atomic numbers 58 through 71 and 90 through 103, respectively

Nonmetals

* Nonmetals can be brittle and dull. They are also poor conductors of electricity.
* As a typical nonmetal, hydrogen is a gas that forms compounds by sharing electrons with other nonmetals and by forming ionic bonds with metals
* All the halogens, Group 17, have seven outer electrons and form covalent and ionic compounds, but each halogen has some properties that are unlike each of the others in the group.
* The noble gases, Group 18, are elements whose properties and users are related to their chemical stability.

Mixed Groups

* Groups 13 through 16 include metals, nonmetals, and metalloids.
* All synthetic elements are short-lived. These elements are found toward the bottom of the periodic table.