        - 3 Types of Structures: body-centered cubic, face-centered cubic, and hexagonal close-packed arrangements.
    - Body-Centered Cubic
        - Every atom has eight neighbors
        - The elements sodium, potassium, iron, chromium, and tungsten crystallize in this pattern.
    - Face-Centered Cubic
        - Every atom has twelve neighbors
        - The elements copper, silver, gold, aluminum, and lead form this pattern
    - Hexagonal Close-Packed
        - Every atom has twelve neighbors
        - Pattern is different than face-centered because of its hexagonal shape
        - The elements magnesium, zinc, and cadmium form this pattern.
- Alloys
    - Most of the metals you encounter are alloys.
        - Alloys: mixtures composed of two or more elements, at least one of which is metal.
            - Ex: Brass- alloy of copper and zinc
        - Alloys are important because their properties often are superior to those of their component elements.
            - Ex: Sterling silver- 92.5% silver and 7.5% copper; harder and more durable than pure silver
            - Ex: Bronze- seven parts copper to one part tin; harder than copper and more easily cast
                - Nonferrous (non-iron) alloys (like Bronze, Copper-Nickel, and Aluminum alloys) are commonly used to make coins.
    - Alloys can form their component atoms in different ways.
        - If their component atoms in an alloy are about the same size, they can replace each other in the crystal.
            - This is called a substitutional alloy.
        - If the atomic sizes are different, the smaller atoms can fit into the interstices (spaces) between the larger atoms.
            - This is called an interstitial alloy.
                - Ex: Steel- carbon atoms occupy the spaces between the iron atoms.