

## Section 2 Masses of Atoms

- A. Atomic mass—composed mostly of the protons and neutrons in the nucleus
1. Unit of measurement for atomic particles is atomic mass unit (amu) which is one-twelfth the mass of a carbon atom containing six protons and six neutrons.
  2. Atomic number—the number of protons in an atom; number of protons also identifies the element
  3. The sum of the number of protons and neutrons in the nucleus of an atom is the mass number.
- B. Isotopes—atoms of the same element with different numbers of neutrons
1. Different isotopes have different properties.
  2. Number of neutrons is equal to mass number minus atomic number.
  3. Name of element followed by mass number identifies the isotope.
  4. Average atomic mass is the weighted-average mass of an element's isotopes.
  5. Average atomic mass is closest to its most abundant isotope.

**Discussion Question**

How do atomic number and mass number differ? Atomic number—number of protons in an atom; mass number—sum of the number of protons and neutrons in an atom

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