

Isotopes of Elements

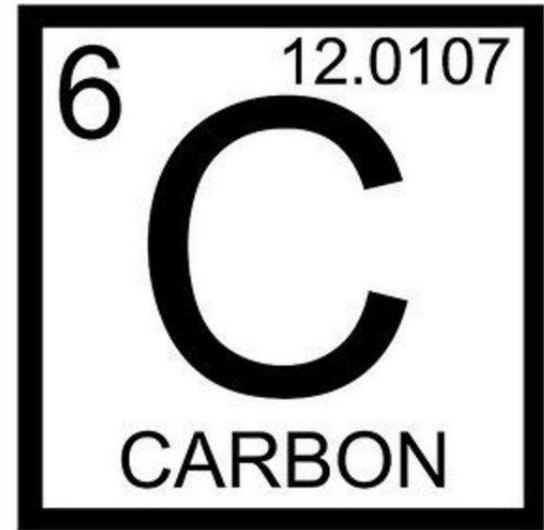
Atomic Structure and the Periodic
Table

Objective:

- To be able to explain how isotopes of an element differ from the most common atomic form for the same element

Atomic Mass

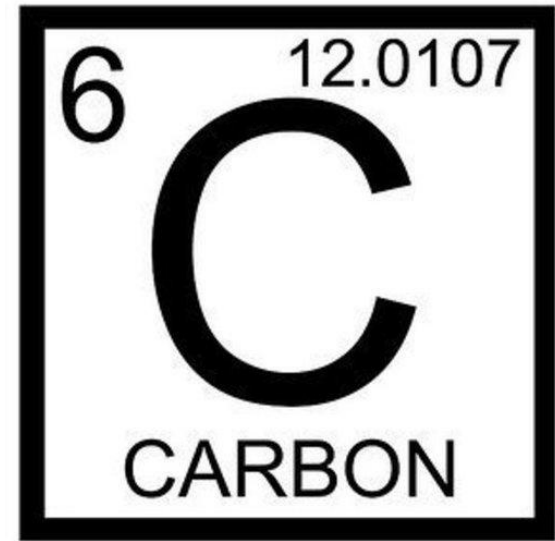
- Atomic Mass: the mass of an atom based on the number of protons and neutrons
- Unit for Atomic Mass: atomic mass unit (amu)
- On the modern periodic table, are the atomic masses for the elements written as whole numbers?



NO!

Atomic Mass

- What does the atomic mass tell us about atoms of an element?
- There are different atoms for the same element
- The atomic mass is an **average mass** of all the **forms** of an **atom** for an **element**.



Isotopes

- Isotopes are the uncommon atom forms of an element
- All forms of an element have the same number of protons and electrons
- Isotopes differ in the number of neutrons in the nucleus of an atom
- Isotopes can have more or fewer neutrons than the most common form of an atom

Three Isotopes of Hydrogen

