

Biology Note-Taking Guide (Put me in your student folder)

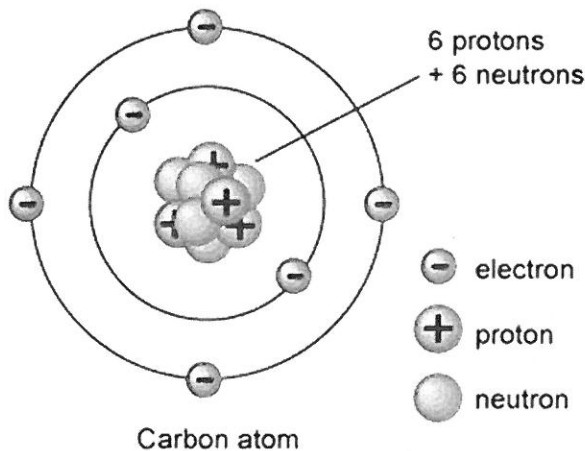
2.1: The Nature of Matter

Part A: Matter

1. Matter takes up _____ and has _____.
2. All living and nonliving matter is composed of 92 naturally occurring basic _____ (Periodic Table).
3. Elements cannot be broken down to substances with different _____ or _____ properties.
4. _____ elements (C, H, N, O, P, S) make up _____% of all living things.

Part B: Atomic Structure

1. Chemical and physical properties of atoms (e.g., mass) depend on the _____ particles.
 - a. Different atoms contain specific numbers of _____.
 - b. Protons and neutrons are in the _____ of atoms; _____ move around the nucleus.
 - c. Protons are _____ charged particles; _____ have no charge; both have about 1 atomic mass unit of _____.
 - d. _____ are negatively charged particles.



2. The atomic mass of an atom is about equal to the sum of its _____ and _____.
3. All atoms of an element have the same number of _____, the atoms atomic number.

Atomic number	→	6	
		C	← Elemental symbol
Element name	→	Carbon	
		12.01	← Atomic weight

Look at the picture above

Carbon's atomic number is _____.

This means it has _____ protons and _____ electrons

Carbon's atomic weight is _____. This number rounds down to 12

Atomic weight = protons + neutrons

$12 = 6 + \text{neutrons}$

How many neutrons does Carbon have?