

ATOMS - Different atoms have unique atomic #s

↳ ISOTOPES - (brands of atoms within an element)

- atoms of the same element with different #s of n^0

↳ same atomic #: different mass

eg. Carbon-12
/ element name mass #

$$\text{Mass \#} = \#p^+ + \#n^0$$

	$\#p$	$\#n$
C-12	6	6
C-13	6	7
C-14	6	8

$$-6 \quad 12 = 6 + \#n^0 - 6$$

$$6 = n^0 \text{ in C-12}$$

- Mass # refers to the mass of one specific atom

- atomic mass is the weighted average of all atoms of an element.

* Carbon-14 is radioactive

- "radioactive" means it is unstable
- unstable because it doesn't have the right balance of protons + neutrons

* All atoms want stability

To become stable, atoms will do a process called radioactive decay.

emit particles
and/or
energy

