

Atomic Structure



Atoms contain 3 different subatomic particles



Protons

+1



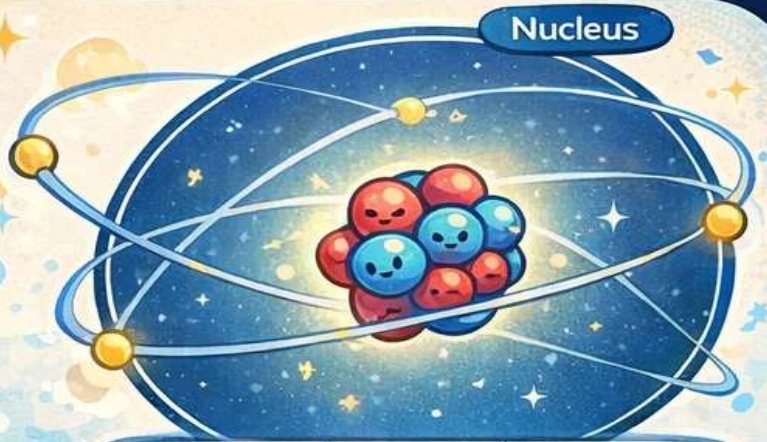
Neutrons

0



Electrons

-1



Protons and neutrons are found in the nucleus, while electrons orbit the nucleus in shells.

Particle	Charge	Mass
Proton	+1	1
Neutron	0	1
Electron	-1	0.0005

Electron Shells

The first shell can hold a maximum of 2 electrons.

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The rest of the shells can hold a maximum of 8 electrons.



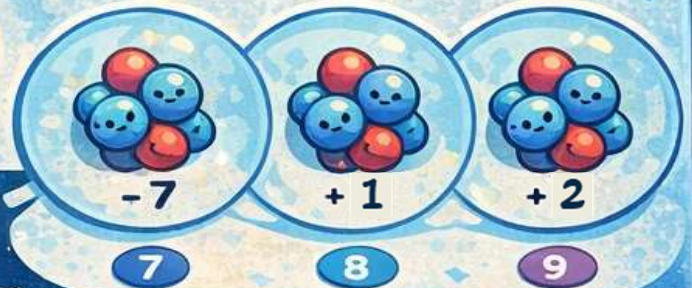
The rest of the shells can hold a maximum of 8 electrons.

Isotopes

Isotopes have the same number of protons but a different number of neutrons.

${}^7_3\text{Li}$

Lithium has 3 protons, 4 neutrons and 3 electrons ($7 = 3 + 4$)



${}^7_3\text{Li}$
 $7 - 3 = 4$

The number of neutrons, ("top number) minus the number of protons (bottom number)