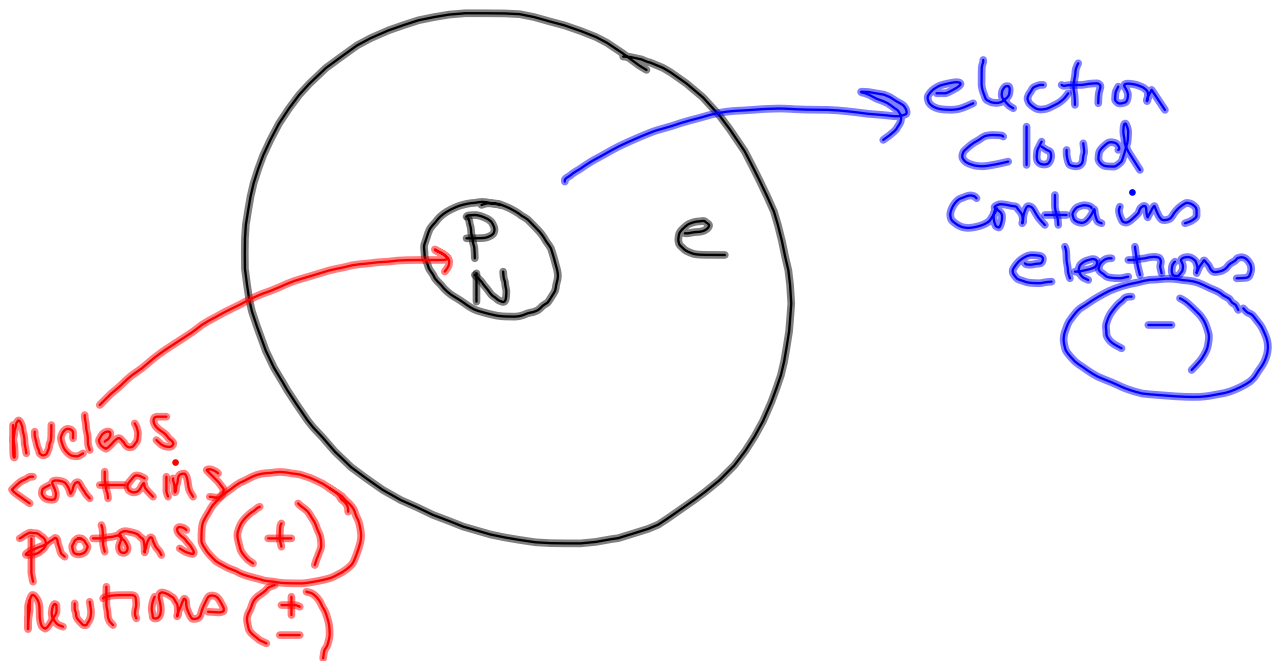


Atoms

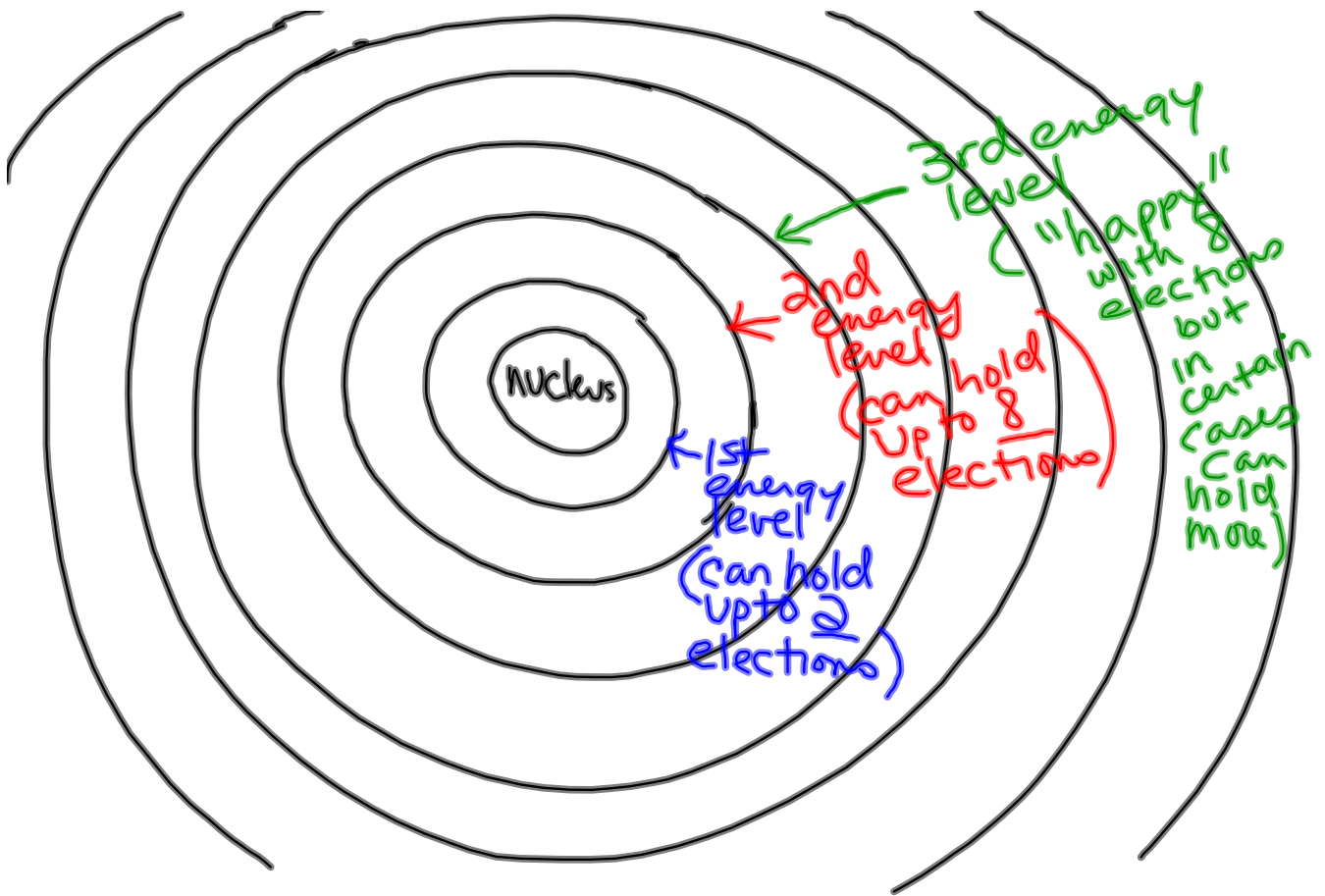


there is organization within
the electron cloud.....

electrons are found on
"energy levels" within the cloud

* there are 7 possible energy
levels within the electron
cloud.

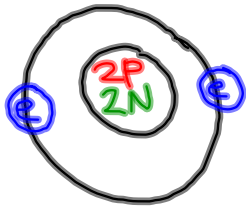
- electrons fill these levels using
a specific pattern



So.....

ex) Helium

2P
2N
2e



2P So, one atom
of helium
alone in nature
will have

2e!

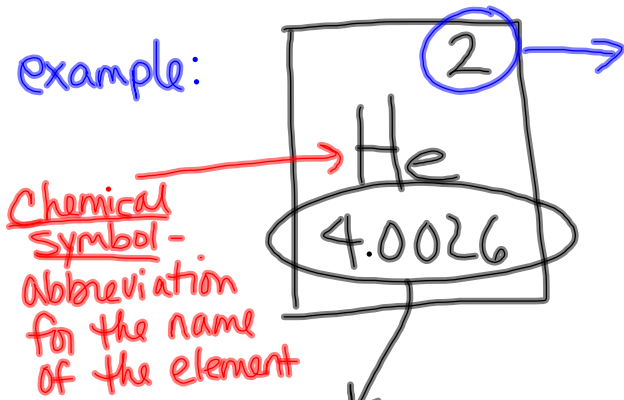
Why? because
all atoms alone
in nature are
neutral!

Where do we get this info? Periodic Table!!

each element on the P.T. has its own box.

the box gives us info. about atoms of that element.

example:



Chemical Symbol -
Abbreviation
for the name
of the element

Atomic number -
the number of
protons in one
atom of this
element.

(if we assume
that this atom
is alone in nature
then this is also
the # of electrons)

Atomic mass -
the mass of
one atom of
this element

So... 2p 2e

because most of
an atom's mass is
in the nucleus, the
atomic mass is \approx
the mass of the nucleus.

If we round the atomic mass,
we can say it is equal to the
total number of particles in
the nucleus:

ex) $4.0026 \approx 4$ particles
in the
nucleus

4 total particles - 2 of them are protons = 2 neutrons