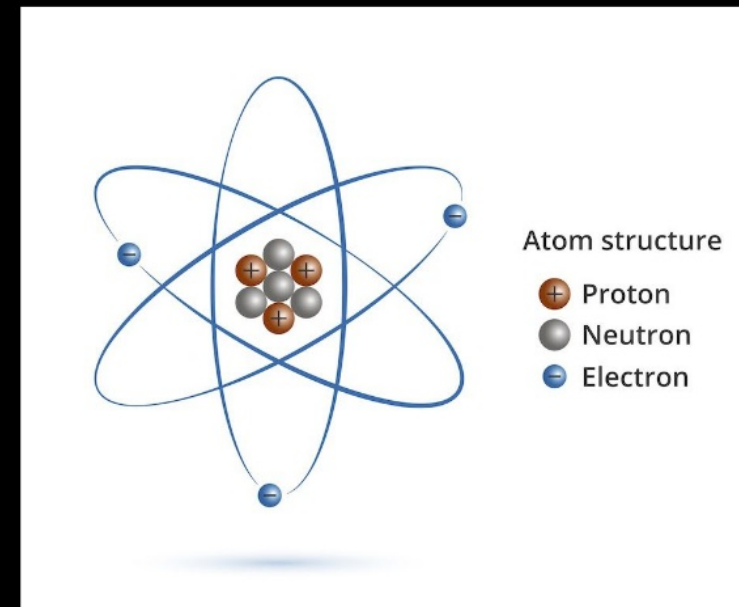


2.13.20

Atomic Structure: History and Atomic Number

Today's Objectives:

- Learn how the atom's structure was understood over time
- Learn the particles in the atom
- Use the atomic number to classify atoms



History of atomic structure - Science is a process!!!!

Democritus (400 BC) *All matter is made of atoms.*

Dalton (1800) *All compounds are made of atoms in set ratios (H₂O)*

- Chemical rxns re-arrange atoms*
- Atoms can't change into other atoms.*

Rutherford (1911) *Discovered nucleus of atom (Atoms are 99.999% empty space)*

Atomic Mass Unit (amu) -

Mass of 1 proton

or

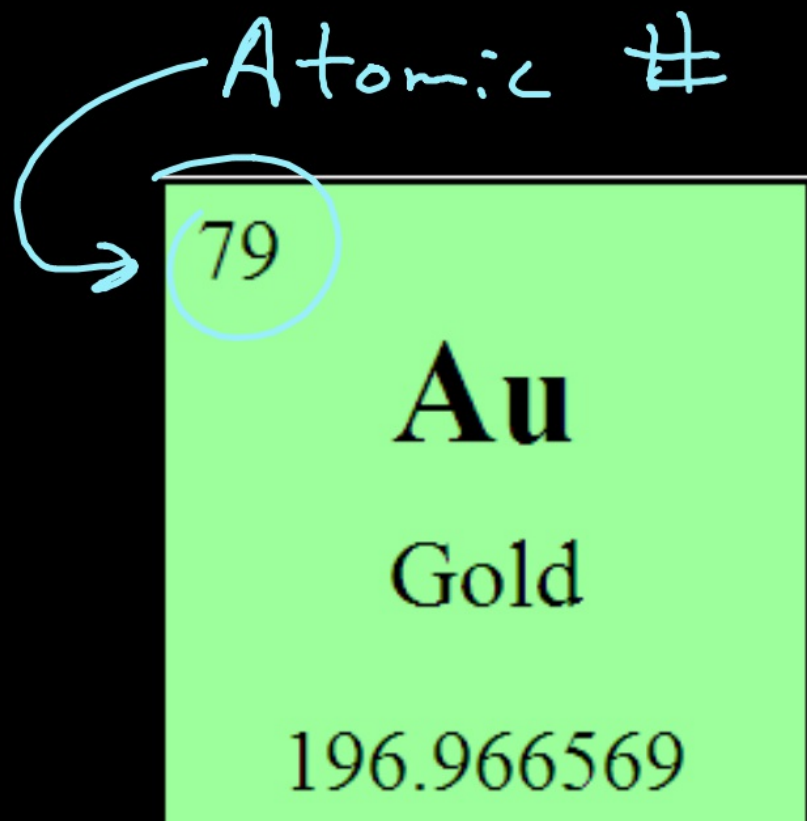
1 neutron

<u>NAME</u>	<u>CHARGE</u>	<u>MASS (amu)</u>	<u>Where is it?</u>
Proton	+1	1	Nucleus
Neutron	0	1	Nucleus
Electron	-1	1/1835	Energy Rings

Nuclear → New Clear ..

Atomic Number: - equal to protons
- tied to identity of element
- always a whole number!

Electrically neutral: Protons = Electrons
(+) (-)



Every gold atom has 79 protons!

↑
Atomic Mass

Google "build an atom", click on the first link

Click play button, Atom tab

