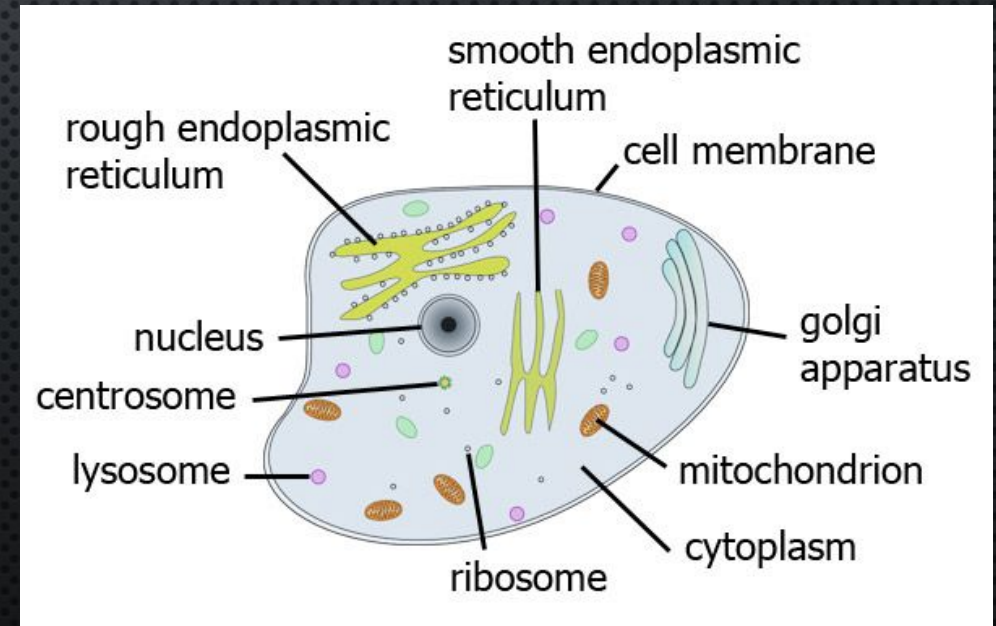
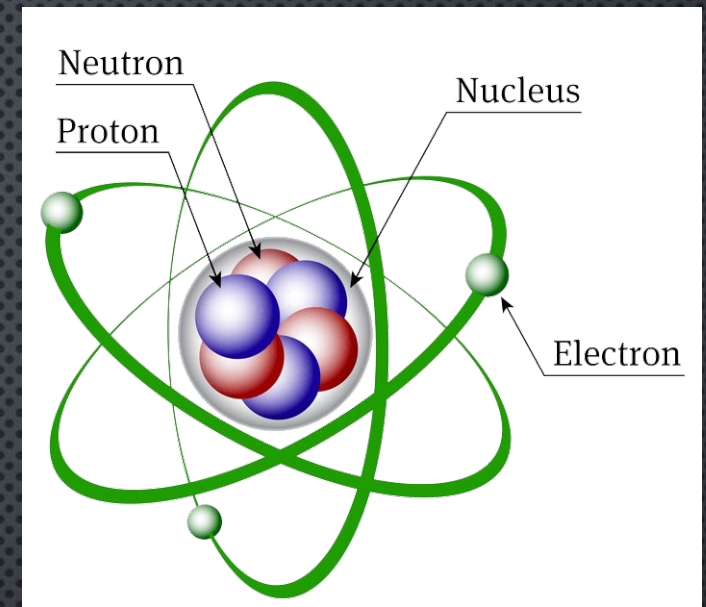


September 10, 2018

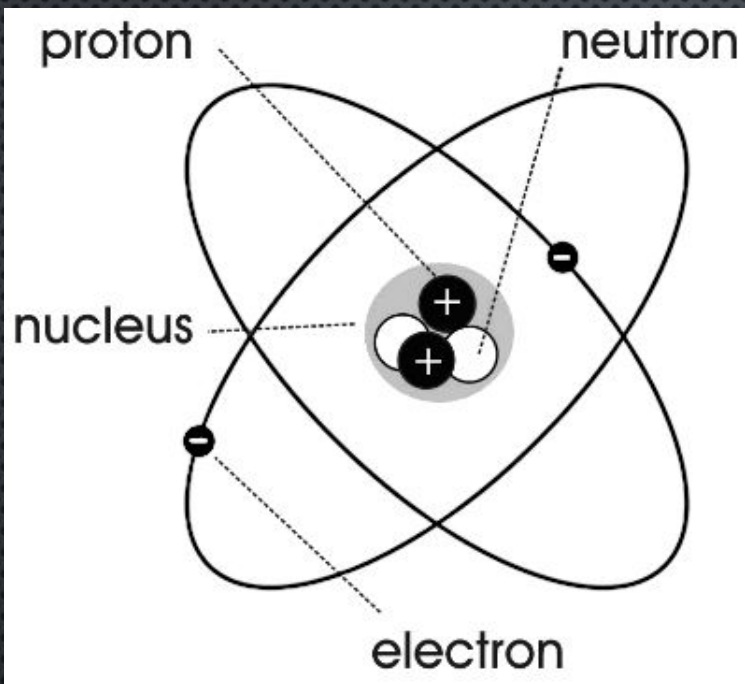
**Mastery Objective:** The students will describe and model the atomic composition of an atom by illustrating a carbon atom.

**Drill Warm-Up:**

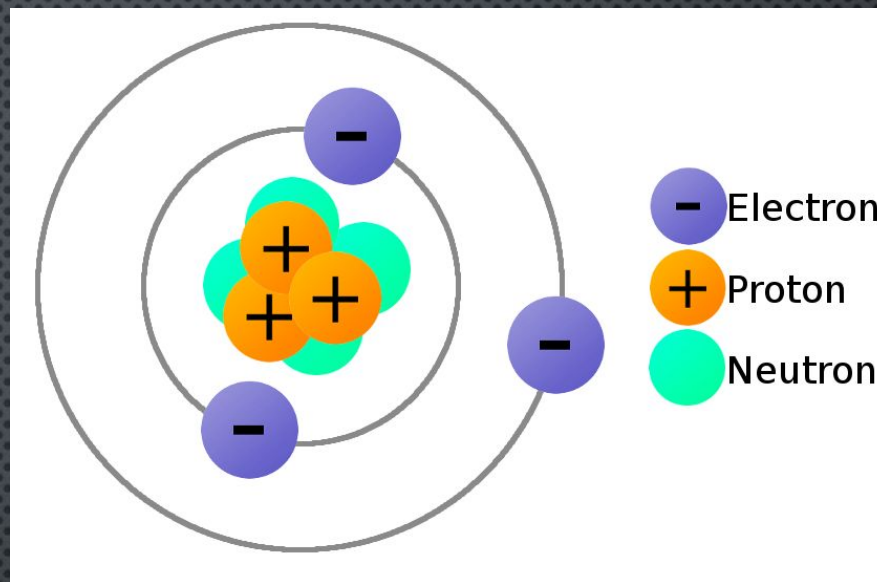
1. Observe and compare the atom and the animal cell to the right. What do they have in common?
2. Cytoplasm makes up the water interior of cells. Observe the cytoplasm in the diagram. What do you think makes up the interior of atoms?



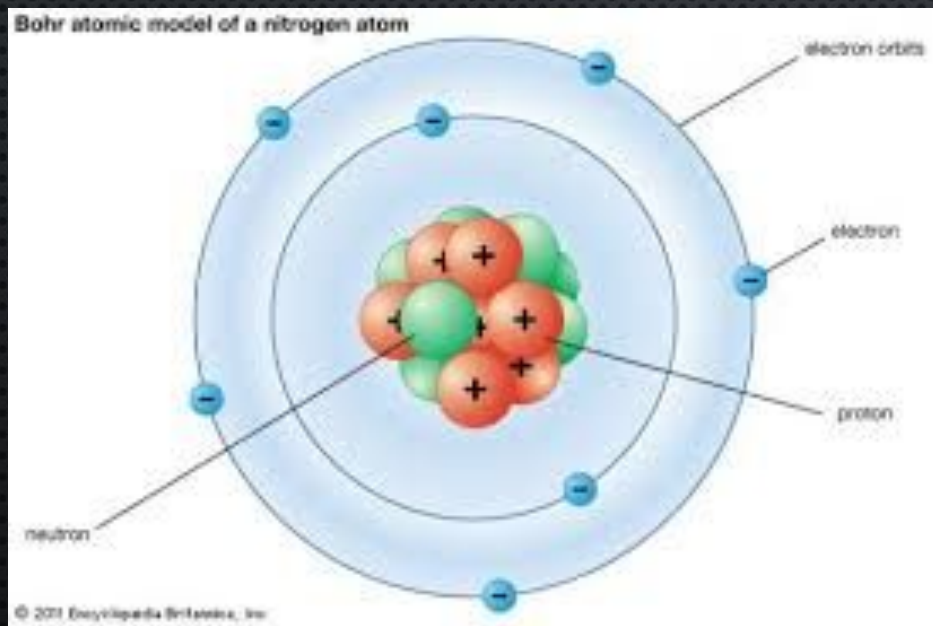
1.



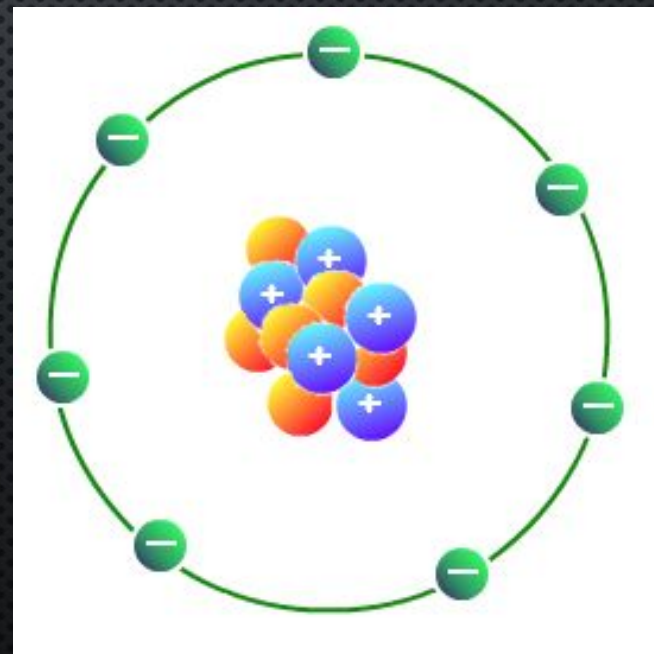
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3.

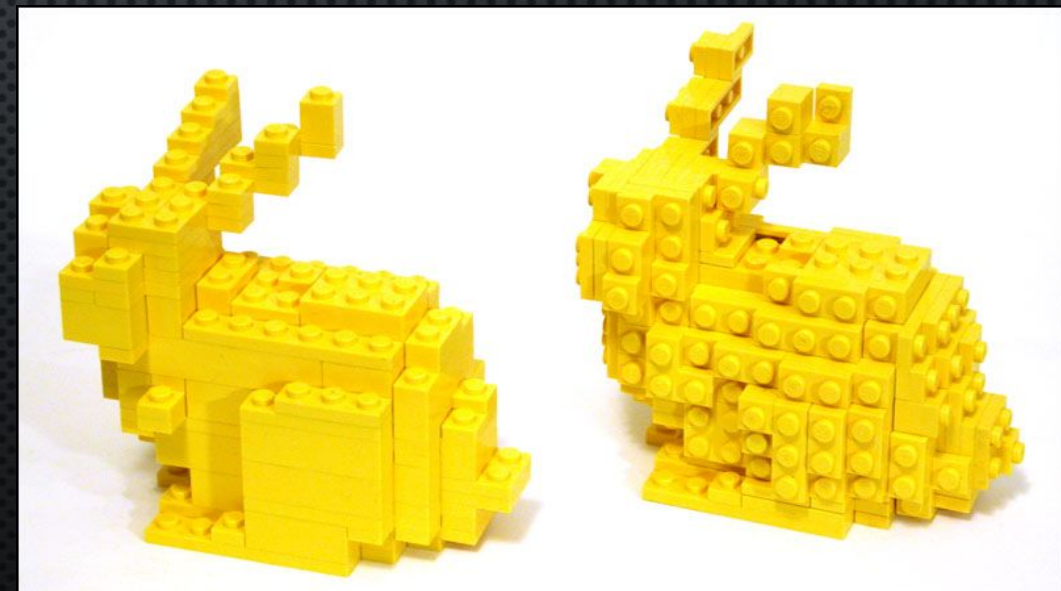
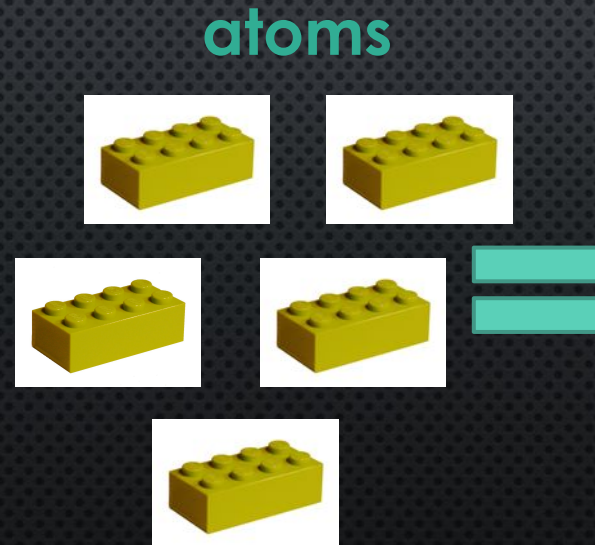
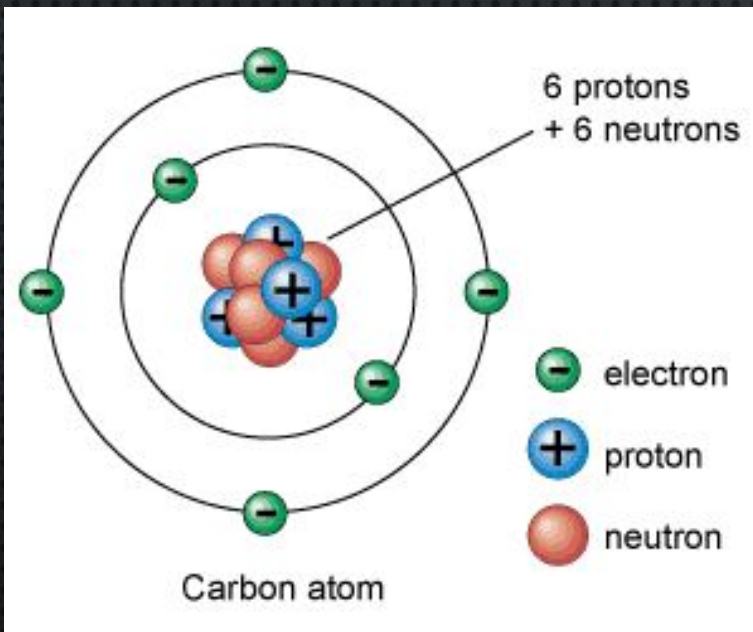


4.



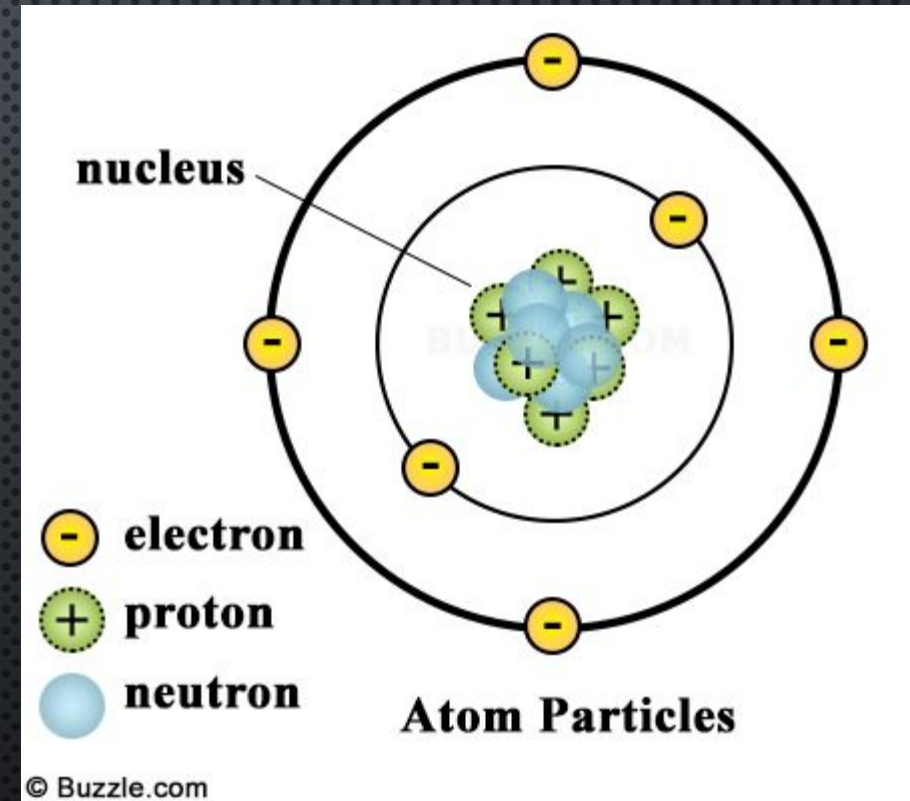
# What is an atom?

- the most basic unit of matter
- matter has mass (made up of 'stuff') and volume (takes up space)
- has a dense nucleus and a cloud of electrons that surround it



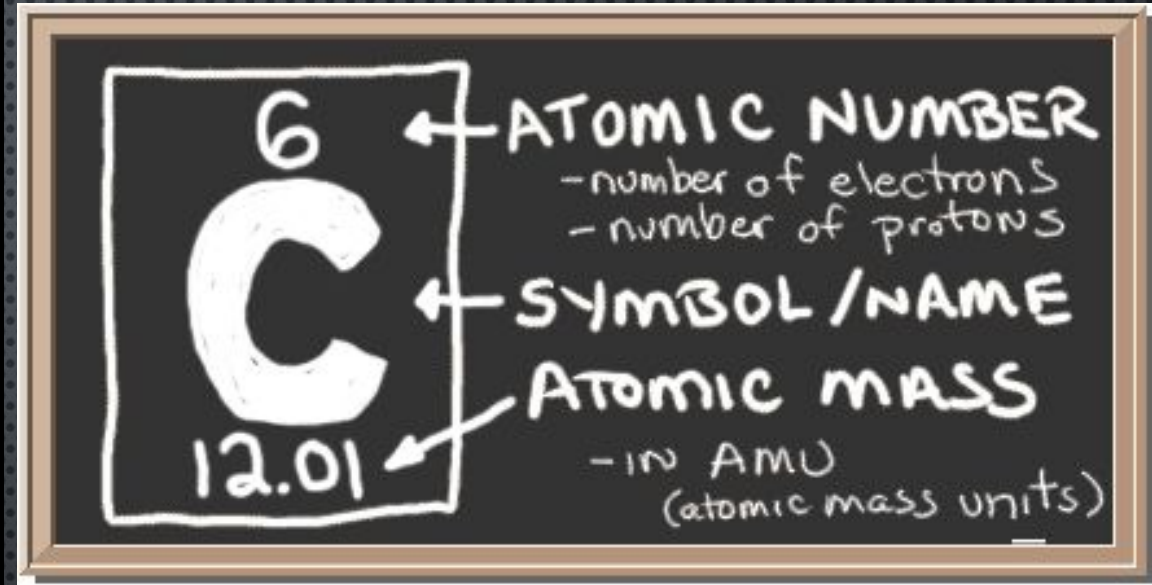
# What are the subunits of an atom?

Subunit	Charge	location	Mass (amu)
protons	+ positive	inside nucleus	1
neutrons	no charge (neutral)	inside nucleus	1
electrons	-- negative	fly around nucleus in orbitals (shells)	none



Color code the atom on your note sheet

# How to Draw a Simple Atom



1. Determine the # of protons and neutrons in the atom.

Atomic # = # of protons.

# of neutrons = Atomic Mass – Protons

3. Determine the # of electrons.

Atomic # = # of electrons.

4. Draw two circles around the nucleus.

5. Place two electrons on the first circle and four electrons on the second circle.

Electron shell	Number of Electrons that Fit
1	2
2	8
3	8
4	18
5	18
6	32

1	← atomic number
H	← element symbol
Hydrogen	← element name
1	← atomic weight

Element	Protons	Neutrons	Electrons
Hydrogen			
Sodium			
Oxygen			

8	←
O	←
Oxygen	←
16	←

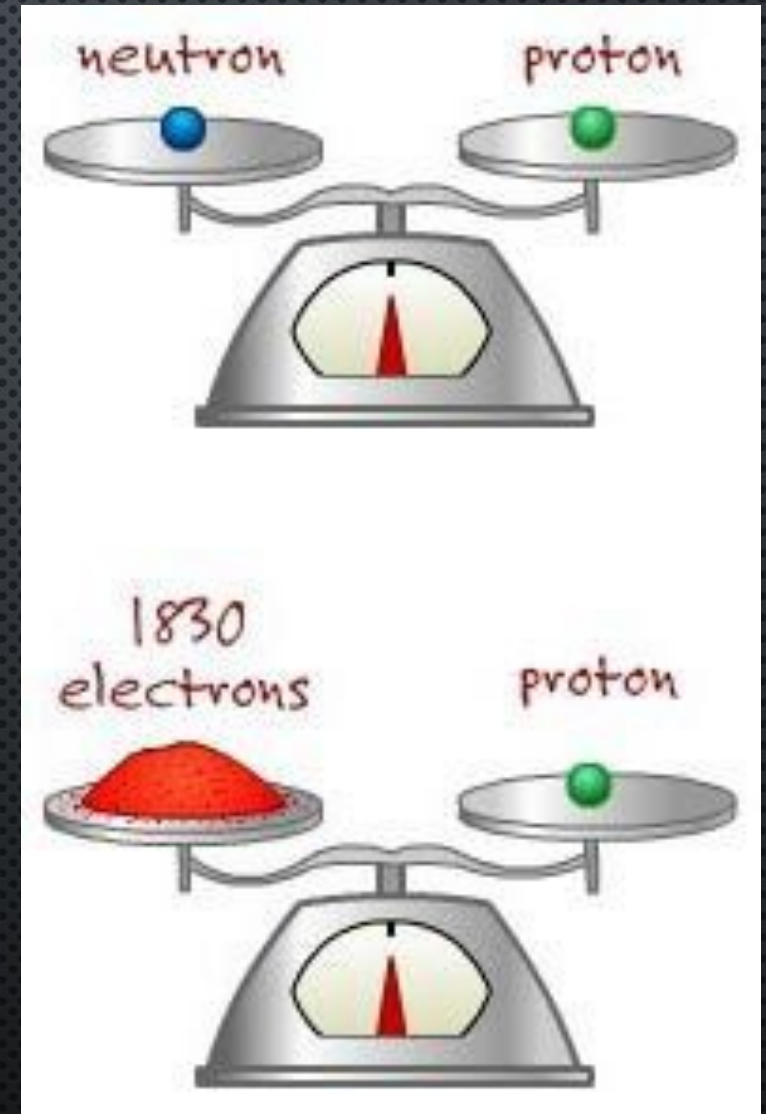
11
<b>Na</b>
Sodium
23

September 11, 2018

Mastery Objective: The students will describe the atomic composition of an atom by analyzing atoms to identify them.

Drill Warm-Up:

1. What is the center of an atom called?  
What two subatomic particles are found in this area?
2. Which subatomic particle has the least mass?
3. Draw a simple diagram of a phosphorus atom.



September 12, 2018

Mastery Objective: The students will describe the atomic composition of atoms by drawing bohr models of atoms.

Drill Warm-Up:

1. Form a common first name by 'adding' up the following three atoms. (Hint: Groups are columns. There are 18 groups in the periodic table.)
  - a. Period 4, Group 10
  - b. Neutrons = 6, Group 14
  - c. Atomic Number = 19

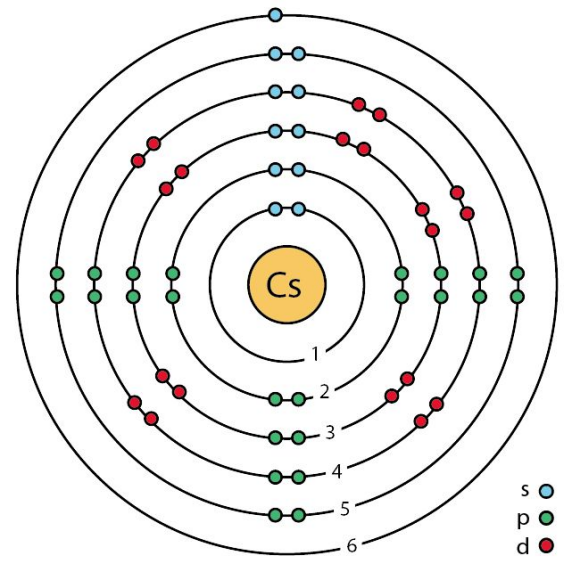
**IF WE'RE MADE OF ATOMS**



**DOES THAT MEAN THE ATOM IS TRYING TO LEARN ABOUT ITSELF?**



1	H																	He
2	Li	Be											B	C	N	O	F	Ne
3	Na	Mg											Al	Si	P	S	Cl	Ar
4	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
5	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
6	Cs	Ba	La-Lu	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
7	Fr	Ra	Ac-Lr	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn	Nh	Fl	Mc	Lv	Ts	Og



6	La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yt	Lu
7	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	As	Fm	Md	No	Lr

# Bohr Model Homework

Name  
Date  
Class

## Bohr Model HW

1. oxygen (O)

3. boron (B)

2. Scandium (Sc)

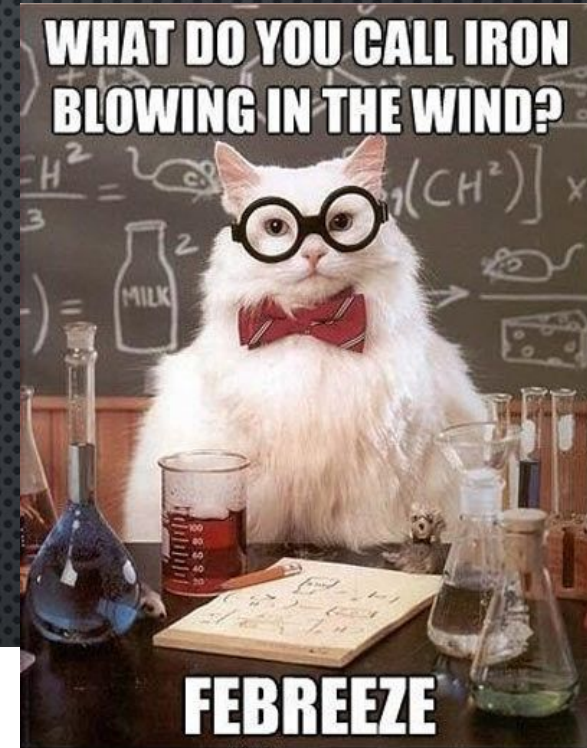
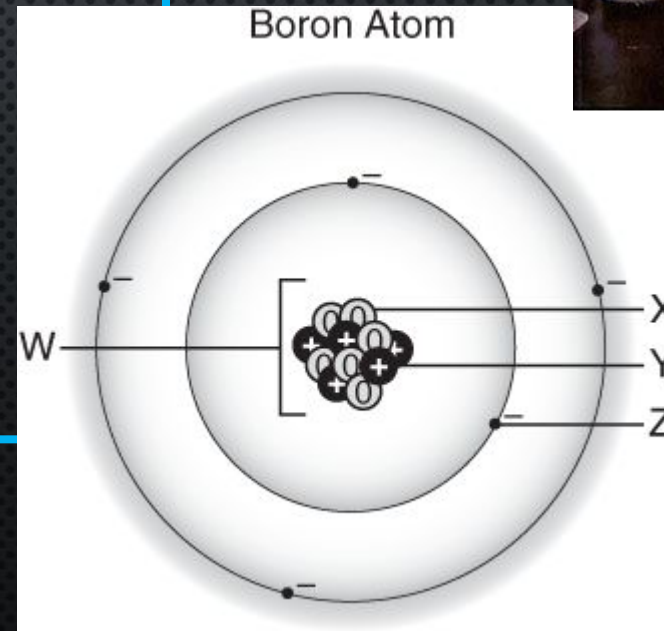
4. Iron (Fe)

September 13, 2018

**Mastery Objective:** The students will describe the atomic composition of atoms by drawing Bohr models of atoms to make a word.

**Drill Warm-Up:**

1. Identify W, X, Y, and Z in the diagram to the right.
2. Why is each atom neutral? Why isn't it positively or negatively charged as a whole?

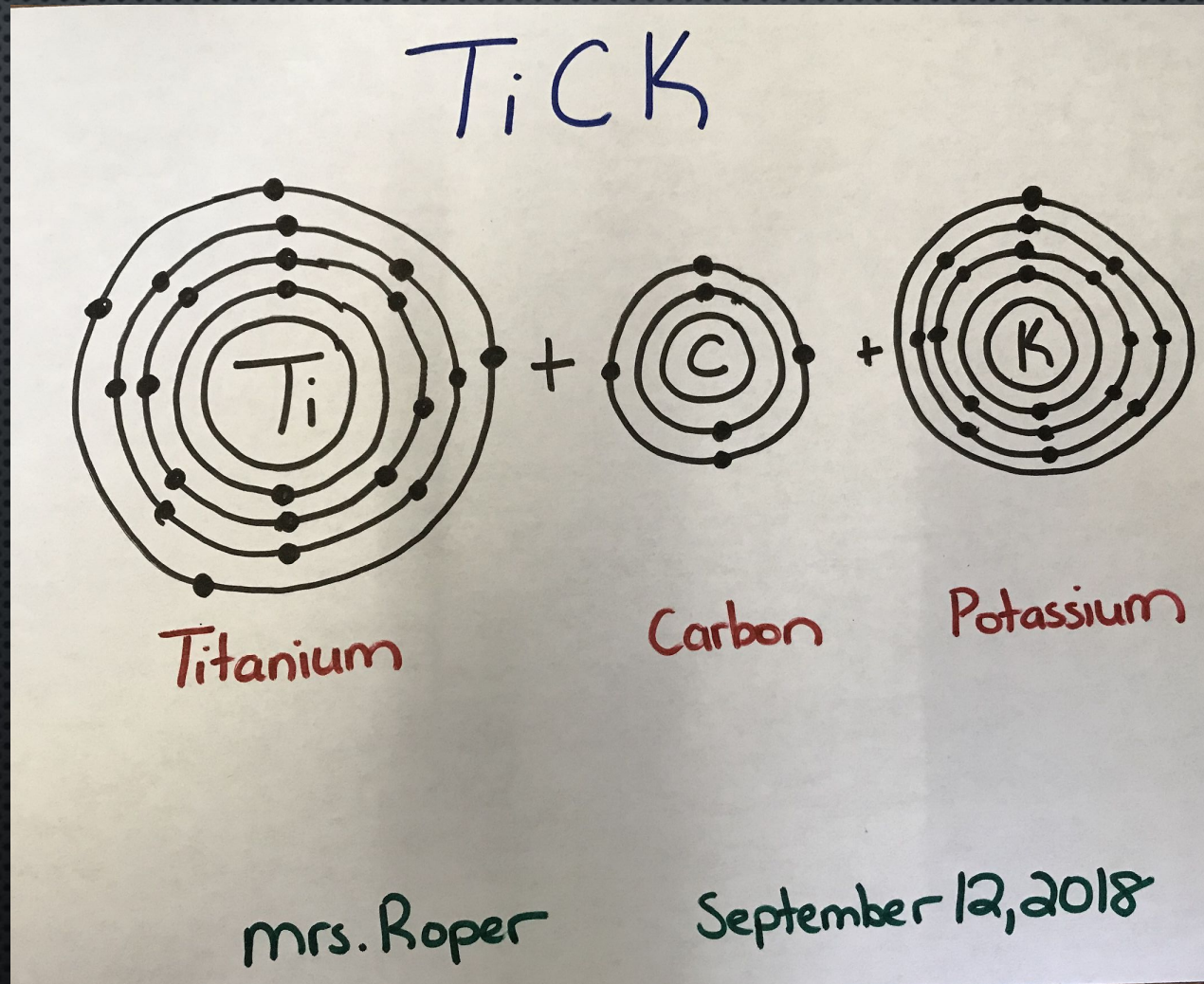




# Paired Assignment

Combine two or more atoms to form a word.

Set it up like this:



September 14, 2018

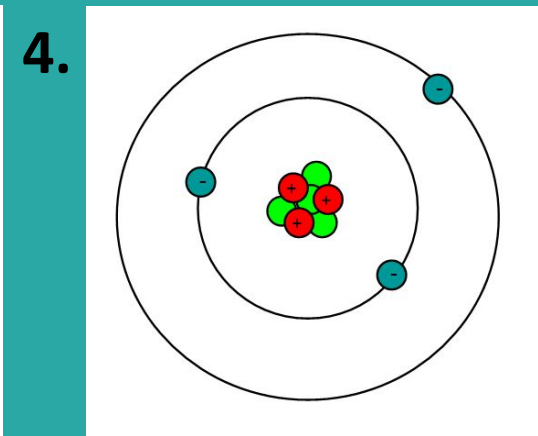
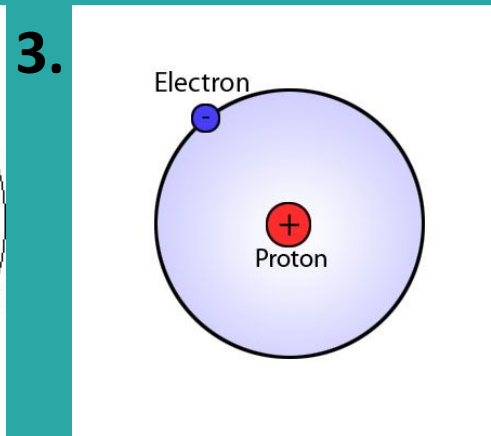
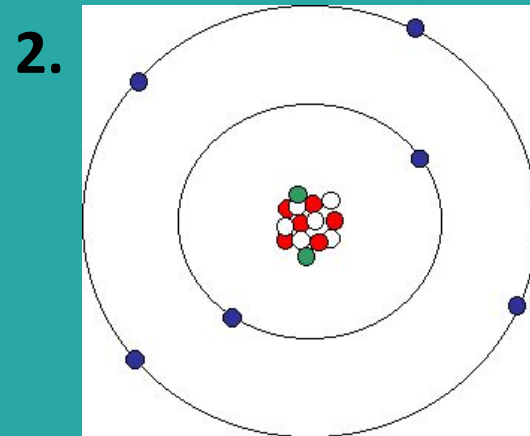
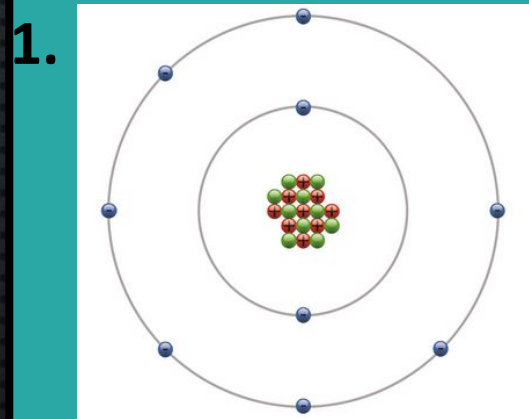
Mastery Objective: The students will describe the atomic composition of atoms by gathering information from a Bill Nye Video.



The atomic symbol for confusion

Drill Warm-Up:

Identify the following atoms:





**H<sub>2</sub>O**