

THURSDAY, JANUARY 24th

DO NOW

- In your notebooks, to be checked, solve this problem...

There are about 15 pounds per square inch in 1 atmosphere. These are units of Weather!

Know:

$$15psi = 1atm$$

Asked: How many pounds per square inch are in 90 atmospheres?

TODAY'S PLAN

1. Do and review the **DO NOW** and **Qualitative Prompt (QP)**!
 - Today's **QP** = QP QUIZ PREP = Take out your SGS (STUDY GUIDE SLIDE) and ANSWER two questions from it; ONE from the DO column and ONE from the KNOW column!
2. Open books, **WORK** on today's **AO!**
3. ***HW** = STUDY FOR OUR CHEMISTRY QUIZ + WORK ON HERO/VILLAIN POSTERS!

TODAY'S ACADEMIC OBJECTIVE

Today you will **REAWAKEN** your Scientific Minds by **RE-REVIEWING** the basics of **CHEMISTRY!**

THE SGS - STUDY GUIDE SLIDE – ATOMIC BASICS QUIZ

• Students must KNOW:

1. What is all Matter made of?
2. What are the 3 parts of an Atom, where are they located, what are their masses & charges, and how can you use the numbers on the Periodic Table to find each one?
3. What was JJ Thompson's contribution to the model of the Atom?
4. What are Groups/Families and Periods on the Periodic Table, and how does the Periodic Table organize the Elements?
5. Know the history of Atomic Theory.
6. What is an Isotope? What is an Ion?

• Students must be able to DO:

1. Compare and Contrast Atoms, Elements, Molecules, and Compounds.
2. Locate where Metals, Nonmetals, and Metalloids are on the Periodic Table, and identify the properties of each.
3. Use the Periodic Table to find the Name, Chemical Symbol, Atomic Number, Protons, Neutrons, Electrons and average Atomic Mass of an Element.
4. Draw a diagram of a Neutral Atom using information on the Periodic Table.
5. Find the number of Neutrons in an Atom using its Atomic Mass.



THE SGS - STUDY GUIDE SLIDE – ATOMIC BASICS QUIZ

• Students must KNOW:

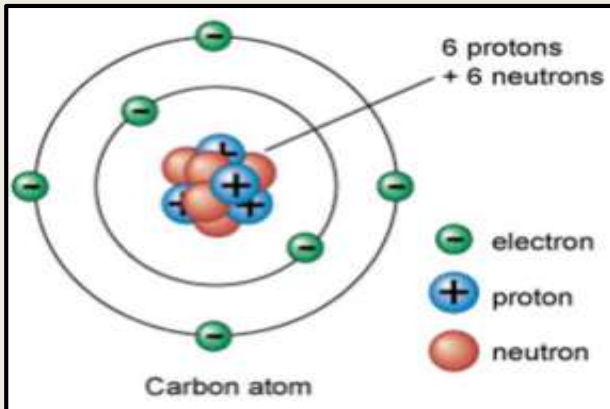
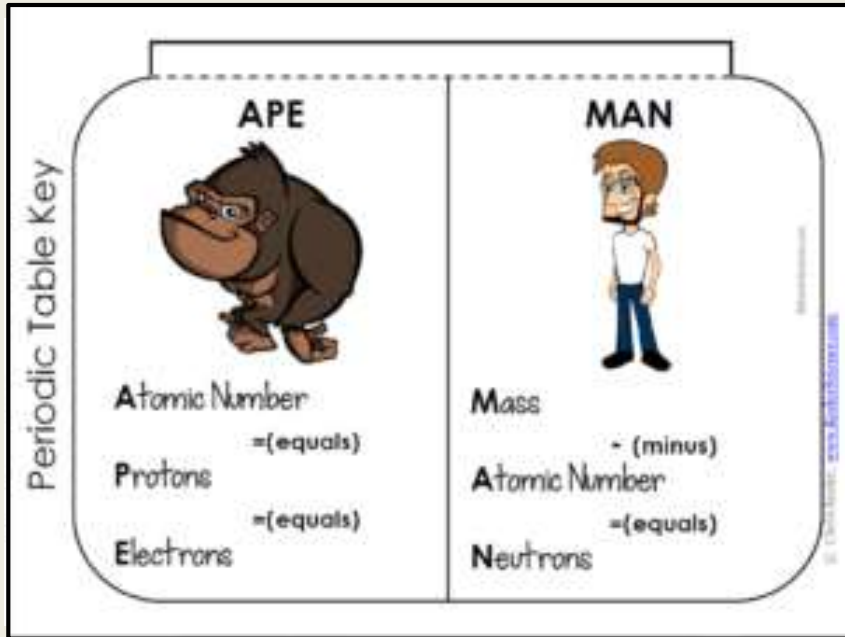
1. Atoms
2. Protons, Neutrons, & Electrons. Protons & Neutrons are in the Nucleus, Electrons are orbiting around. Neutrons are the biggest, then Protons, and then Electrons which are much smaller. Protons are Positive, Neutrons are Neutral, and Electrons are Negative. On the periodic Table the “Atomic Number” is Protons (and Electrons if the Atom is “Neutral”), and the “Mass Number” is Protons + Neutrons (Subtract Mass Number – Atomic Number to find the Neutrons!)
3. He discovered the Electron
4. Groups/Families are Columns, Periods are Rows, and the Periodic Table is organized by increasing Atomic Number
5. See Pg. 160 of your book!
6. Isotope = Version of an Element with a Varying Number of Neutrons. Ion = Version of an Element with a Varying Number of Electrons.

• Students must be able to DO:

1. Atoms = Basic Particle that makes up all Matter. Elements = Types of Atoms with a Specific Number of PROTONS. Molecules = Two or more Atoms Bonded Together. Compound = Two or more DIFFERENT Atoms (aka Elements!) Bonded Together.
2. Metals are on the left. They are shiny and good conductors. Nonmetals are on the right. They are dull and poor conductors. Metalloids are in the middle, touching the “staircase”. They are “semi-conductors”.
3. See the attached sheet.
4. Draw little circles with a “p” in the middle for Protons and an “n” for Neutrons in the middle for the Nucleus. Then draw circles with an “e” in them for the electrons orbiting around.
5. Round the Atomic Mass. Atomic Mass – Atomic Number = Neutrons

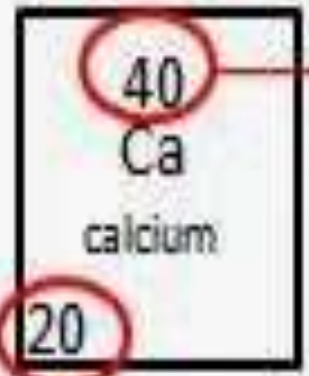


How To Interpret An Element Box!



$$\# \text{ neutrons} = \text{mass number} - \# \text{ protons}$$

Mass number \approx Atomic Weight



Mass number
(always the bigger number)

Atomic number
(always the smaller number)

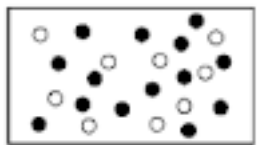
Atomic number equals the number of protons or electrons.

Mass number equals the number of protons + neutrons.

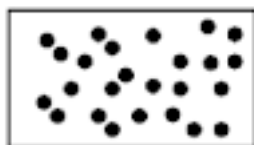
FRIDAY, JANUARY 25th

DO NOW

Know:



Model X



Model Y



Model Z

Asked: Which statement **best** describes the model that shows the atomic structure of a pure element?

A: Model X since the particles are not combined

B: Model Y since the particles are all the same

C: Model Z since the particles can be broken down

TODAY'S PLAN

1. Do and review the **DO NOW** and **Qualitative Prompt (QP)**!
 - Today's **QP** = QP QUIZ BONUS = LIST who discovered the PROTON & NEUTRON and then WRITE the name of the particles that make up Protons and Neutrons!
2. Open books, **WORK** on today's **AO!**
3. ***HW** = CREATE at least **ONE** Joke/Riddle/Pun about Chemistry!!!

TODAY'S ACADEMIC OBJECTIVE

Today you will **RISE UP** and conquer the **BASICS** of Chemistry by **ACING** a Chemical Quiz!