

Unit 3

NAME

Class Work

11/14/13

3.11 Review Day

Do Now

DO NOT sit down! Today you will need to EARN your seat.

Objective

SWBAT review all materials from Unit 3 – Atomic Theory!

# SIT DOWN if you can tell me...

- What is the definition of a mixture?

# SIT DOWN if you can tell me...

- How is a mixture different from a pure substance?

# SIT DOWN if you can tell me...

- What is the difference between a compound and an element?

# SIT DOWN if you can tell me...

- What is an example of a compound?

# SIT DOWN if you can tell me...

- What is an example of a heterogeneous mixture?

# SIT DOWN if you can tell me...

- What are the three subatomic particles?

# SIT DOWN if you can tell me...

- What is the charge of a proton?



# SIT DOWN if you can tell me...

- Where is a neutron located?

# SIT DOWN if you can tell me...

- What subatomic particles have mass in an atom?

# SIT DOWN if you can tell me...

- What is a another word for the number of protons?

# SIT DOWN if you can tell me...

- How do you calculate the mass of an atom?

# SIT DOWN if you can tell me...

- How do you calculate the charge of an atom?

# SIT DOWN if you can tell me...

- When you write in isotopic notation, where does the mass number go?

# SIT DOWN if you can tell me...

- What is the atomic number of oxygen?

# SIT DOWN if you can tell me...

- When you write in isotopic notation, where does the atomic number go?



# SIT DOWN if you can tell me...

- A neutral atom has an atomic number of 4...  
how many electrons does it have?

# SIT DOWN if you can tell me...

- What is an isotope?

# SIT DOWN if you can tell me...

- What is the mass of an atom with 4 protons, 4 neutrons and 4 electrons

# SIT DOWN if you can tell me...

- Who discovered the presence of electrons?

# SIT DOWN if you can tell me...

- What is ONE thing that Rutherford proved?

# SIT DOWN if you can tell me...

- What is the second thing that Rutherford proved?

# SIT DOWN if you can tell me...

- What is that element (with 4 protons, 4 neutrons and 4 electrons)

# SIT DOWN if you can tell me...

- What information do you need to calculate the average atomic mass?



# SIT DOWN if you can tell me...

- What would the charge be of an atom with 4 protons and 5 electrons?

# SIT DOWN if you can tell me...

- Where is the charge written for an atom?

# SIT DOWN if you can tell me...

- What is the first step in calculating the average atomic mass?

# SIT DOWN if you can tell me...

- How many protons are in a hydrogen atom?

# SIT DOWN if you can tell me...

- How many neutrons are in an atom with a mass number of 10 and an atomic number of 4?

# SIT DOWN if you can tell me...

- What is the mass of an electron?

# SIT DOWN if you can tell me...

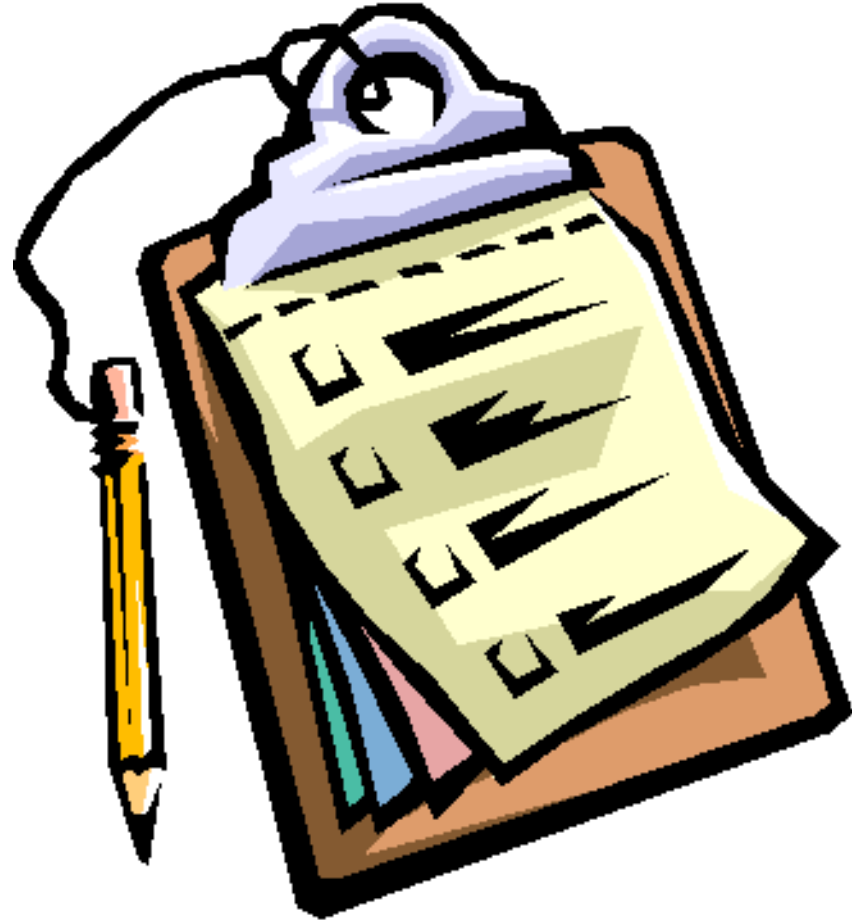
- Where are neutrons located?

**GREAT WORK!**



# Agenda:

- Do Now
- Whole Group Review
- Check Your Work
- Whiteboards
- Questions
- HOMEWORK



# Whole Group Review

# Check Your Work!

- Take 2 minutes to check your answers on your Regents Review sheet HW with the answer keys provided.
- 5 minutes - Turn and talk to your partner- try to help each other figure out WHY you got certain questions wrong.

Help each other – we're all in this together!

- 2-4 minutes – Whole group help on the document camera

# White Boards

- Reminder: both partners are discussing answers before writing on the white boards
- Boards go up on UP (5...4...3...2...1...UP)
- When boards go down, immediately wipe your answers, markers down, eyes on me.

# Question 1

- Draw a picture of a mixture of two elements.

## Question 2

- What is the mass number of an atom with 8 neutrons, 8 protons and 8 electrons?
- What element must this atom be?
- This element likes to have a -2 charge. How many electrons would this element have if it had a -2 charge?

## Question 3

- $^{42}_{20}\text{Ca}$  is an example of a calcium isotope.  
Write another example of a calcium isotope (in isotopic notation). Label each part of the picture

## Question 4

Write the symbol (isotopic notation) for Beryllium with a mass of 9 amu.



# Question 5

- Calculate the average atomic mass of Carbon with these two naturally occurring isotopes:
- C-12 = 98.93%
- C-14 = 1.07%

# Question 6

- Calculate the average atomic mass of Lithium with these two naturally occurring isotopes:
- Li-6 = 7.43%
- Li-7 = 92.5%

Be prepared to explain WHY your answer makes sense!

# Questions?

- Everybody writes...
  - What did you learn in this unit? How does it fit with our big picture of chemistry?

# HOMEWORK

STUDY for your test (watch videos and use study guide!)

Think Ready Report and Presentation are due  
FRIDAY!