**Period 8 Quiz**

**CP Physical Science – Mr. Rita Total: 35 points**

1. Why did scientists accept Dalton’s ideas over Democritus?
   1. Dalton had data to back him up
   2. Dalton had atoms made out of wood
   3. Dalton hypothesis was proven to be true.
   4. Dalton had proven his theory
2. If a beam of electrons were run close to the negative pole of a magnet, the beam would do this.
   1. Bend away from the magnet
   2. Bend toward the magnet
   3. Disappear
   4. You would notice a change of color
3. Why did some of the particles in the Rutherford experiment go right through the foil?
   1. There was nothing there to deflect the particle
   2. There was a hard dense nucleus
   3. The foil was too thin
   4. The foil was too thick
4. What do protons and electrons have that a neutron does not?
   1. A charge c. More mass
   2. Location in the nucleus d. Energy levels
5. If an atom has a mass number of 8 and an atomic number of 6, it must have…..
   1. 6 protons and 8 neutrons
   2. 6 neutrons and 8 protons
   3. 6 protons and 2 neutrons
   4. 6 protons and 2 electrons
6. An atom has 2 energy levels, the first energy level has 2 electrons, the second has 4. Which level would have electrons with the most amount of energy?
   1. Both energy levels would have an equal amount of energy.
   2. The first with 2
   3. The second with 4
   4. None of the above
7. Rutherford’s model of the atom was incomplete. He did not define the existence of which subatomic particle?
   1. Proton c. Neutron
   2. Electron d. Nucleus
8. What was unexpected about the behavior of the electron in the atom?
   1. If it is so small, why does it have so much mass?
   2. If it is negative, why isn’t it repelled by the neutron?
   3. If it is negative, why isn’t it drawn in to the proton?
   4. Why does an excess of electrons make an isotope?
9. Why must indirect evidence be used to study the structure of the atom?
   1. Because the particles move at a slow rate
   2. Because of the kinetic theory
   3. Dalton’s atomic theory won’t allow direct evidence.
   4. Because it is too small to see directly
10. Dalton’s theory states that different elements will……
    1. Have a different color
    2. Have the same number of protons
    3. Have the same mass
    4. Have a different mass
11. In Thomson’s experiment the beam was deflected by…..
    1. The positive pole of the magnet
    2. The protons
    3. The lower energy levels
    4. The negative pole of the magnet
12. When you compare the mass of an electron to the mass of a neutron…
    1. You see that the masses are the same
    2. You see that it takes 1836 neutrons to equal the mass of one electron
    3. You see that neutron has no mass
    4. You see that the electron has almost no mass
13. An atomic number or 12 tells us that the atom has this.
    1. 6 electrons
    2. 12 neutrons
    3. 12 protons
    4. 6 protons
14. An atomic mass of 12 tells us that the atom has this.
    1. 5 protons and 7 electrons
    2. 6 electrons and 6 neutrons
    3. 8 protons and 4 neutrons
    4. All of the above
15. An atomic number or 12 tells us that the atom has this.
    1. 12 neutrons
    2. 6 protons
    3. 12 electrons
    4. 6 electrons
16. Who discovered the electron?
    1. N. Bohr
    2. Democritus
    3. J.J. Thomson
    4. Rutherford
17. Who discovered the neutron?
    1. J. Dalton
    2. M. Gell-Mann
    3. J. Chadwick
    4. Schrödinger

**Give the proper vocabulary term for questions 16 to 24. (2 points each)**

**Spelling counts!**

1. Oxygen has 8 protons and 8 neutrons. Its \_\_\_\_\_\_\_\_\_\_\_\_\_\_ is 16 *amu*.
2. This has a mass of 1 *amu* and is the positive subatomic particle.
3. This was discovered by J. J. Thomson, has no mass and is the negative subatomic particle.
4. This was found by Rutherford and contains the protons and neutrons.
5. This is found in the nucleus and has a charge of zero.
6. This is the region of space around the nucleus of an atom.
7. Some elements have a different number of neutrons. They are known as this.
8. This number identifies the element, and the number of protons and electrons.
9. These are separate orbits around the nucleus of an atom. Electrons can reside in them depending on their level of energy.

**2 Point Bonus Essay:**

Now that I have seen the two methods that can be used to teach this class, give an opinion for the following:

1. Which method do you prefer?
2. What can you do to keep a preferred, positive learning environment in this science class?