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### Learning Activity Sheet Development of Atomic Theory

**Directions: Read and analyze the following questions. Circle the letter of the correct answer.**

- Which of the following subatomic particles were discovered by Sir J. J. Thomson?  
A. electrons  
B. protons  
C. Positrons  
D. neutrons
- Who was the Greek philosopher who conceptualized atoms as indivisible particles?  
A. Aristotle  
B. Democritus  
C. Plato  
D. Socrates
- Ernest Rutherford formulated the nuclear model of an atom based on his well-known gold foil experiment. What part of the atom did he discover?  
A. nucleus  
B. neutrons  
C. negative core  
D. neutral core
- Which of the following is the basis of Niels Bohr's atomic model?  
A. solid sphere  
B. clouds  
C. solar system  
D. raisin bread
- Who was the Greek philosopher who contradicted Democritus' and Leucippus' atomic theory and instead said everything is made up of four elements?  
A. Aristotle  
B. Democritus  
C. Leucippus  
D. Empedocles
- Which of the following statements is correct about John Dalton's atomic theory?  
A. Matter is made up of atoms.  
B. All atoms of an element have different masses and properties.  
C. Chemical reactions do not involve the rearrangement of atoms.  
D. Compounds are not formed from the combination of one or two elements.
- How is Niels Bohr's atomic model similar to the one proposed by Ernest Rutherford?  
A. Both models are based on the solar system model.  
B. Both models have electrons positioned inside the nucleus.  
C. Both models proposed that electrons are negatively charged.  
D. Both models have three subatomic particles: electrons, protons, and neutrons.
- Which of the following atomic models correctly depicts Dalton's atomic theory?  
A. plum pudding model  
B. billiard ball model  
C. planetary model  
D. quantum mechanical model
- How did J. J. Thompson improve the assumptions of Dalton's in his atomic theory?  
A. He did not improve anything from Dalton's assumption.  
B. He proposed that there are much smaller particles than atoms.  
C. He discovered the negatively charged particles called electrons in an atom.  
D. He stated that atoms are made up of neutrally charged particles called neutrons.
- Which of the following models did Rutherford and Bohr use as the basis of their atomic models?  
A. chocolate chip cookie  
B. plum pudding bread  
C. solar system  
D. billiard ball