

Unit 6, Particles with Internal Structure , Atomic Theory, & Bonding Study Guide

1. What are cathode rays? Describe the evidence that supports the idea that particles have a property we call charge.	
2. What was the proof of electrons? Describe how Thomson concluded that the atom had electrons.	
3. Describe the Thomson model of an atom. Sketch the model	
4. Sketch atoms of the “sticky tapes” before separation and after separation. Indicate which tape has a positive charge and which has a negative charge	
5. List properties that distinguish metals from non-metals. Non-metals _____ electrons and become _____ ions.	
6. Why are metals good conductors of electricity? Metals _____ electrons and become _____ ions.	
8. Explain ions and give some examples	
9. Define cation. What happens to a neutral atom to form a cation?	
10. Define anion. What happens to a neutral atom to form an anion?	
11. How did Rutherford’s experiment cause Thompson’s model to be revised? Explain or sketch Rutherford’s experiment. What did Rutherford discover?	

12. Sub-atomic particle properties: complete the chart.	Particle	Relative Charge	Mass (kg)	Mass Number (relative mass)	Location
	Proton				
	Neutron				
	Electron				
13. Nucleus					
14. Explain atomic number. <i>What is the symbol for atomic number?</i>					
15. What distinguishes one atom from another atom?					
16. Explain isotopes.					
17. Explain ionic substance (ionic compound).					
18. Explain molecular substance (molecular compound)					
19. Identify the position on the periodic table metals and non-metals are located.					
20. Define valence electrons					
21. Identify the number of valence electrons in the “main group elements”.					
22. Covalent Bond					
23. Ionic Bonds					