
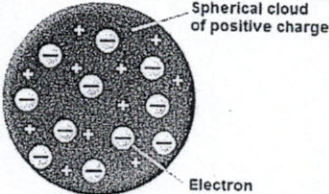
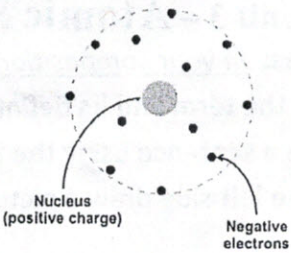
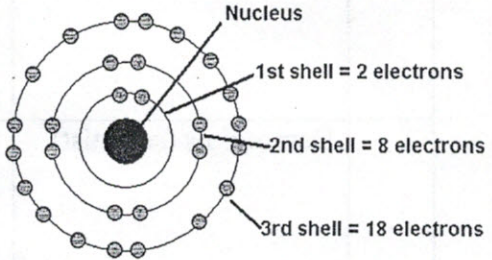
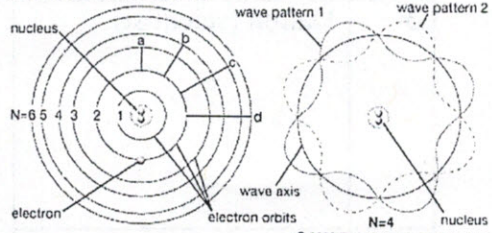


# Vocabulary Unit 3 – Atomic Structure #1

Directions: In your composition book, on the right side -

1. Copy the term and its definition.
2. Write a sentence using the term, showing understanding. (The term has to be in the sentence)
3. On the left side draw a picture for each term.

1	Model	In science a model is the best representation of an object or system using current data. As data changes the model must change.	
2	Democritus (scientist)	Theory- all matter, the stuff that makes up the world around us, is actually composed of tiny, invisible particles, <i>he named atoms.</i>	
3	Dalton (scientist)	<i>Wrote the atomic theory of matter.</i> His <b>model</b> of an atom was tiny spheres that bounce around like hard balls	
4	Atom	The smallest particle of an element that has the properties of that element. It is made of equal positive protons and negative, giving it a zero or neutral charge. It also can contain neutrons that add mass.	
5	Electron	Negative particles outside the positive nucleus of an atom	
6	Thomson (scientist)	<i>Discovered electrons</i> in experiments with a Cathode Ray Tube. His <b>model</b> of an atom was negative electrons in a positive sphere. *The Cathode Ray Tube Experiment	 Thomson's Plum pudding model
7	Radioactivity	The spontaneous emission of radiation from an element (discovered by Becquerel)	
8	Nucleus	Center of an atom and where all of an atom's positive charge and mass is found. It contains positive protons and neutral (no charge) neutrons.	

9	Rutherford (scientist)	<p><b>Discovered the nucleus</b> of an atom in experiments where he shot radioactive particles through a gold foil. His <b>model</b> of an atom was all positive charge in the center surrounded by negative charges. <i>*protons</i></p> <p><i>*The Gold Foil Experiment</i></p>	<p>RUTHERFORD'S ATOMIC MODEL</p>  <p>Nucleus (positive charge)</p> <p>Negative electrons</p>
10	Bohr (scientist)	<p><b>Wrote the shell theory of atomic structure.</b> Looked at how objects take in and give off light. His model of an atom was all the electrons in set energy levels he called orbits around the small positive nucleus.</p>	 <p>Nucleus</p> <p>1st shell = 2 electrons</p> <p>2nd shell = 8 electrons</p> <p>3rd shell = 18 electrons</p>
11	Schrodinger (scientist)	<p><b>Wrote the wave theory of atomic structure.</b> His model of an atom has electrons in wave like patterns around the small positive nucleus and adds sub-energy levels of different shapes.</p>	<p>Models of atomic structure</p>  <p>nucleus</p> <p>electron</p> <p>electron orbits</p> <p>wave axis</p> <p>wave pattern 1</p> <p>wave pattern 2</p> <p>N=6 5 4 3 2 1</p> <p>N=4</p> <p>nucleus</p> <p>© 2009 Encyclopædia Britannica, Inc.</p>