**THEORIES/EXPERIMENTS ON ATOMIC STRUCTURE**

This worksheet will not be graded, but you will be required to know this information. Feel free to answer the questions in the way that helps you best (drawings, bullets, phrases, etc) and use the back page.

1. What are the four parts of Dalton’s theory of the atom?
2. What is a cathode ray tube?
3. How were electrons discovered?
4. Explain the plum-pudding model (1-2 sentences should be enough).
5. What is an alpha particle?
6. What did Rutherford expect to see?
7. What were Rutherford’s findings?
8. What were Rutherford’s conclusions?
9. How does the Bohr model describe the atom?
10. Why is the Bohr model analogous to our solar system?
11. Which orbits hold more electrons, the inner orbits or the outer orbits?
12. What happens when an electron jumps from an outer orbit to an inner orbit?

JOHN DALTON (Question 1)

<http://www.youtube.com/watch?v=gtWt6_9bLgA&feature=related>

JJ THOMPSON & CATHODE RAY TUBE (Questions 2-3)

<http://www.youtube.com/watch?v=7YHwMWcxeX8&feature=related>

<http://www.youtube.com/watch?v=XU8nMKkzbT8&NR=1>

PLUM-PUDDING MODEL (Question 4)

<http://www.hcc.mnscu.edu/chem/V.08/plum_pudding_model.jpg>

<http://en.wikipedia.org/wiki/Plum-pudding_model> (first two paragraphs only)

RUTHERFORD & THE GOLD FOIL EXPERIMENT (Questions 5-8)

<http://www.youtube.com/watch?v=Q8RuO2ekNGw&feature=related>

<http://www.youtube.com/watch?v=5pZj0u_XMbc&feature=related>

<http://js082.k12.sd.us/My_Classes/Physical_Science/atoms/1911_goldfoil.jpg>

BOHR MODEL (Questions 9-10)

<http://www.youtube.com/watch?v=ZkNPBy2i0ss&feature=related>

<http://www.youtube.com/watch?v=rSZrZWXxxgQ&feature=related>

<http://www.pas.rochester.edu/~afrank/A105/LectureVI/Bohr1.gif>