



CALIFORNIA CONTENT STANDARDS: Science, Chemistry

5.1.1 Identify the inadequacies in the Rutherford atomic model

5.1.2 Identify the new proposal in the Bohr model of the atom

5.1.3 Describe the energies and positions of electrons according to the quantum mechanical model

5.1.4 Describe how the shapes of orbitals, related to different sublevels differ.

**Voc:** **Copy Vocabulary # 5**  
Define Words using text

**Demo #6:** **Hydrogen Balloon**  
Exothermic Reaction: gas, heat, light

**Chemistry Standard:** 1e:students know how to relate the position of an element in the periodic table to its quantum electron configuration  
1i: students know the experimental basis for the development of the quantum theory or atomic structure and the historical importance of the Bohr model  
1j:students know that spectral lines are the result of transitions of electrons between energy levels

**Lecture:** PPT: Electron Orbitals (Page 31 in NB)  
Chapter 5.1 Electron Orbitals  
Electron Orbitals Overhead  
Copy down chart in notes

**Class Work:** **Electron Orbital Practice (1-4)**

**WB:** **Section 5.1, Page 43-44**

**Home Work:** **Page 132, 2 and 5**  
**Page 149, 22-29**