

Proof: Unit 4 Chapter 4 Arrangement of Electrons in Atoms

Vocabulary: Target 04-01 Waves and Particles

photon	frequency	wavelength	ground state
excited state	photoelectric effect	electromagnetic radiation	excited state
line-emission spectrum	noble gas	continuous spectrum	electromagnetic spectrum

LEARNING STANDARD

YOUR PROOF:

Target 04-01 Use Bohr's Model of the atom to explain how atoms give off different forms of electromagnetic energy and to explain how energy levels can be measured

“I can” Statements:

- 04-01 a. Use the mathematical relationship among the speed, wavelength, and frequency of electromagnetic radiation.
- 04-01 b. Discuss the significance of Einstein's photoelectric effect on the model of the atom.
- 04-01 c. Describe the evidence supporting the dual wave-particle nature of light.
- 04-01 d. Explain how the line-emission spectrum of hydrogen was used to develop Bohr's model of the atom.
- 04-01 e. Use line-emission spectra to identify elements.

Rate Your Level of Understanding:

1	2	3	4	
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I need to focus on:

[illegible]

Proof: Unit 04 Chapter 4 Arrangement of Electrons in Atoms						
Vocabulary: Target 04-02 Locate Electrons						
electron configuration	Heisenberg Uncertainty Principle	quantum theory				
Aufbau Principle	quantum	Pauli Exclusion Principle				
orbital	principal quantum number	magnetic quantum number				
angular momentum quantum number	spin quantum number	Hund's Rule				
orbital notation						
LEARNING STANDARD		YOUR PROOF				
<p>Target 04-02 Describe the contents of the nucleus and calculate average atomic mass.</p> <p>“I can” Statements:</p> <p>04-02 a. Explain how the Heisenberg Uncertainty Principle and the Schrodinger Wave Equation led to the quantum model of the atom.</p> <p>04-02 b. List the total number of electrons needed to fully occupy each main energy level.</p> <p>04-02 c. Write the four quantum numbers for any electron.</p> <p>04-02 d. Write the orbital notation and electron configuration for any element in atomic and ionic form.</p> <p>04-02 e. Explain how the Aufbau Principle, Pauli Exclusion Principle, and Hund's Rule apply to where an electron is located.</p>						
Rate Your Level of Understanding:						
1	2				3	4
I need to focus on:						