

Quiz Outline: Atomic Structure and Bohr Diagrams (Topic 2.4: Concept 3, Science 8)

OVERVIEW:

- Atomic structure: Bohr
- Subatomic particles
- Bohr models

LEARNING MAP CRITERIA: THE BEHAVIOUR OF MATTER CAN BE EXPLAINED BY THE KINETIC MOLECULAR THEORY AND ATOMIC THEORY

Relevance	Extending	Proficient	Developing	Emerging
<input checked="" type="checkbox"/>	<p>Explain the rationale of the following aspects of Bohr models, using Coulomb's Law*: why electrons are filled from the inside to out; why electrons are filled singly then paired; the arrangement of protons and neutrons within the nucleus.</p> <p>Demonstrate a sophisticated understanding of Bohr models and subatomic particles by integrating new information to create and evaluate models of ions and compounds.</p>	<p>Draw a Bohr model showing the number of subatomic particles for an atom of the first 20 elements.</p>	<p>List the subatomic particles and identify key traits of each (charge, relative mass, location).</p> <p>Determine the number of subatomic particles in an atom of a given element, given a periodic table.</p> <p>Label and describe nucleus and energy shell.</p>	<p>Recognize that all matter is made of small particles (Kinetic Molecular Theory: 2.3).</p> <p>Coulomb's Law* (Atomic Theory: 2.4).</p>

*Coulomb's Law says that opposite charges attract, and like charges repel. Positive protons will be attracted to negative electrons. Protons will repel other protons, and electrons will repel other electrons. Students will need to understand these concepts, but the term "Coulomb's Law" will not show up on the test, nor will students be required to know it by name.

VOCABULARY:

(Disclaimer: This is not meant to be an exhaustive list. Vocabulary words may appear on the test that are not in this list.)

- atom
- subatomic particle
 - o proton
 - o neutron
 - o electron
- nucleus
- energy shell
- electric charge
 - o positive
 - o neutral
 - o negative
- atomic number
- atomic mass

PRIMARY STUDY MATERIAL:

- Powerpoint:
 - o 2.4 Powerpoint (slides 40-48 only)
- In-class notes and practice questions
- Worksheets:
 - o Subatomic Particles Worksheet
 - o Bohr Models Worksheet (First 20 Elements)
- Textbook pg. 162-163 (note: anything covered on pg 163 that was not discussed in class is not testable...e.g. nuclear force)
- Workbook pg. 92