**Modern Atomic Theory Chapter 4.3**

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**See** [**https://www.learningctronline.com/courses**](https://www.learningctronline.com/courses) **for Materials and Resources.**

**Topics:**

1. Atomic Structure & Modern Atomic Theory

**Objectives:**

* *Explain Atomic History from specific scientist’s perspectives (Democritus, Dalton, Thomson, Chadwick, Bohr, Rutherford).*
* *Understand atomic structure (atomic number, atomic mass, subatomic particles) and be able to define and draw all components. Draw a nuclear symbol for an element.*
* *Explain what makes elements unique in properties (e.g. atomic number, mass, valence) and distinguish isotopes.*
* Describe the modern atomic theory in terms of electrons, energy levels, electron cloud, and electron configuration.
* Analyze what happens to electrons when atoms gain or lose energy?
* Explain, draw, and/or describe scientific models related to how electrons behave in atoms.
* Understand when atoms are most stable in terms of electron configuration.

TAKE NOTE

1. Guided Reading Note-Taking Worksheet (Pearson Text)

1. Pearson Concepts in Action Worksheets
2. Revise the Density Lab Formal Lab Report
3. Lab Flame Tests
4. Test Atomic Structure & Modern Atomic Theory
5. Week 6 Devotional (<https://www.learningctronline.com/devotional>)

Pearson Text Chapter 4: Modern Atomic Structure pp. 113-123

**Guided Reading Note-Taking Worksheet:**

Complete the worksheet for Chapter 4: Modern Atomic Theory (4.3).

**Class Notes: PowerPoint or PDF**

**Homework**:

* 4.3 Modern Atomic Theory (Pearson Concepts in Action)
* Probability of Finding an Electron
* *Assignments will be “spot checked” during class or submitted via email.*

**Lab**: Density Lab (Formal Lab Report)

Revise the Density Lab Report Report as follows:

1. Leave your original lab content and place the corrections BELOW your original content IN EACH SECTION to show the revision. (e.g. If you made errors in the Calculations and Data section, leave those errors, but add the corrections below your content IN THE Calculations and Data section by using a **blue font color**.)
2. Refer to the sample density lab report, but Do NOT copy and paste the model density lab information. Retype in your own words and fill in tables for yourself.
3. Make all the major corrections needed, not just a partial revision (You are being offered an opportunity to learn from your mistakes and receive bonus points for doing so. Please use integrity and respect by doing your own work and using the Model only as a guide).
4. If you follow the designated format, you can earn 1/2 of the points deducted from your grade.
5. When completed, resubmit the lab.
6. The revised Density Lab Report is due before next week's class.

**Lab**: Flame Tests Lab

* Perform the lab as directed using the worksheet provided.
* Complete all calculations and data, showing work whenever appropriate.
* Conclusions should be answered in complete sentences that convey a complete thought.
* Save the documents into your LAB folder in the Physical Science folder on your desktop.
* *Assignments will be “spot checked” during class or submitted via email.*

**TEST:** Atomic Structure & Modern Atomic Theory

1) the academic integrity policy

* Tests must be completed **WITHOUT** referring to books, notes, the internet, people, or any outside resources.
* Students **MAY** use the approved Periodic Tables, approved Reference Tables, or approved equation (formula) sheet (provided by the teacher) along with calculators and scratch paper.
* A guardian should be proctoring the test. Proctoring means to monitor the following:

2) The test is composed of 20 multiple choice questions and some written problems.

* The **multiple-choice test must be taken "in one sitting"**, meaning that once you start the test, you must complete it without interruption. (40 minutes)
* Take a short break (5-10 minutes)
* The **written portion of the test must be taken "in one sitting"**, meaning that once you start the test, you must complete it without interruption. (30 minutes)

3) There is a **90-minute time limit** on this test. Please have the proctor write the time taken at the top of your answer sheet with their signature or initials.

4) Proctors should NOT be reading the test or engaging students during the test.

5) Do NOT use RED font. Black font is best.

Supplemental Resources (Optional)

1. 4.2 Atomic Structure Worksheet (Pearson Concepts in Action)
2. PHET Atomic Models Simulation
3. Vocabulary Crossword Chapter 4
4. Practice Quiz Atomic Structure

[**http://screencast-o-matic.com/watch/cD6ZXZj5Ma**](http://screencast-o-matic.com/watch/cD6ZXZj5Ma) **PHET Simulation: Atomic Model History (5:37)**

[**http://somup.com/cFQ22rVSKR**](http://somup.com/cFQ22rVSKR) **Atomic History Song (Mark Rosengarten (4:14)**

<https://screencast-o-matic.com/watch/cq6nYuuIbb> Electron Configuration (Review) Song (3:24)

<http://somup.com/cYhI28jrpo> The Race Set Before Us 1 Corinthians 9:24-27; Runner (5:11)