2024-2025 Weekly Lesson Planning Document

Week of Monday, August 26, 2024 through Friday, August 30, 2024

EDUCATORS' NAMES: Ms. Burton, Ms. Daughrity, Ms. Mitchell **SUBJECT:** Chemistry I

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Lesson Title: Structure and routine **Unit:** **Chapter:** **Page Number(s):** (It is suggested that you use your curriculum map.)	**Unit 1 Chapter 3: Atoms: The Building Blocks of Matter pp. 69-71**	**Unit 1 Chapter 3: Atoms: The Building Blocks of Matter pp. 69-71**	**Unit 1 Chapter 3: Atoms: The Building Blocks of Matter pp. 74-77**	**Unit 1 Chapter 3: Atoms: The Building Blocks of Matter pp. 74-77**	**Unit 1 Chapter 3: Atoms: The Building Blocks of Matter pp. 74-77**
TN Standard(s): Grade level standard (include standard notation and language). Which State Standard is your lesson addressing? This should also be on your Whiteboard Protocol.	**CHEM1.PS1.11** Develop and compare historical models of the atom (from Democritus to quantum model) and construct arguments to show how scientific knowledge evolves over time, based on experimental evidence, critique, and alternative interpretations.				
Objective (s): What specifically should students be able to do at the end of the lesson? The objective is standards-based. Write the objective in student friendly terms. For example, I can multiply binomials. This is should also be on your Whiteboard Protocol. What do you want students to know, understand and be able to do as a result of this lesson? The objective should be written using the stem… **I CAN….**	**I Can…** Make inferences about what is inside a closed container and explain my reasoning.	**I Can…** Compare and contrast the atomic models of Democritus and Dalton.	**I Can…** Examine the discovery of subatomic particles.	**I Can…** Distinguish between the subatomic particles in terms of relative charge and mass.	**I Can…** Illustrate the similarities and differences between atomic numbers and mass numbers.

Possible Misconception (s): What misconception(s) are you anticipating during this lesson?	Emphasize that the identity of the atom is determined by the number of protons, not the number of electrons or neutrons. The numbers of electrons and neutrons can each vary and the atom will still be of the same element. But if the number of protons changes, then the atom becomes an atom of a different element. Many students confuse mass number with average atomic mass. Emphasize that the mass number is the mass of one particular atom, and average atomic mass is the average mass of a group. Many students do not understand that the mass of a nucleus is less than the sum of the masses of the protons and neutrons making up the nucleus. The difference is due to the binding energy that holds the nucleus together. It is easy to confuse the terms atomic mass and molar mass. Although they are often the same number, atomic mass is the mass of one atom, expressed in u, and molar mass is the mass of one mole of particles, expressed in g/mol.				
Literacy-Based DO NOW: This literacy-based activity should be ready for students to begin working on upon entering class. Students should have an opportunity to read, write, and/or speak.	N/A Element Quiz #3 Names → Symbols (Right Column)	Explain how opinions differ from theories. Identify statements as one type or the other.	N/A Element Quiz #4 Symbols → Names (Left Column)	Which chemical laws are explained by Dalton's Atomic Theory?	N/A Element Quiz #5 Symbols → Names (Center Column)
Agenda for the Day Simple outline of lesson segments or activities that is time stamped. Teacher/class should take 2 minutes or less to review.	▪ Do Now *(8 minutes)* ▪ Review Learning Objective *(2 minutes)* ▪ I Do *(12 minutes)* ▪ We Do *(12 minutes)* ▪ You Do *(13 minutes)* ▪ Exit Ticket *(5 minutes)*	▪ Do Now *(8 minutes)* ▪ Review Learning Objective *(2 minutes)* ▪ I Do *(12 minutes)* ▪ We Do *(12 minutes)* ▪ You Do *(13 minutes)* ▪ Exit Ticket *(5 minutes)*	▪ Do Now *(8 minutes)* ▪ Review Learning Objective *(2 minutes)* ▪ I Do *(12 minutes)* ▪ We Do *(12 minutes)* ▪ You Do *(13 minutes)* ▪ Exit Ticket *(5 minutes)*	▪ Do Now *(8 minutes)* ▪ Review Learning Objective *(2 minutes)* ▪ I Do *(12 minutes)* ▪ We Do *(12 minutes)* ▪ You Do *(13 minutes)* ▪ Exit Ticket *(5 minutes)*	▪ Do Now *(8 minutes)* ▪ Review Learning Objective *(2 minutes)* ▪ I Do *(12 minutes)* ▪ We Do *(12 minutes)* ▪ You Do *(13 minutes)* ▪ Exit Ticket *(5 minutes)*
Beginning of Lesson **I Do** **Science:** Engage & Explore	**I will provide students with an "Investigation Box" with a mystery substance inside the box.**	**I explain the early history of the concept of atoms…focusing on Democritus and John Dalton.**	**I explain the discovery of subatomic particles…focusing on the work of JJ Thomson, Robert Millikan, and Ernest Rutherford.**	**I explain the discovery of subatomic particles…focusing on the work of JJ Thomson, Robert Millikan, and Ernest Rutherford.**	**I explain the discovery of subatomic particles…focusing on the work of JJ Thomson, Robert Millikan, and Ernest Rutherford.**

Middle of the lesson We Do **Science:** Explain and Elaborate	**Work together to determine what might be inside the "Investigation Box."**	**Respond to CFUs embedded in the guided notes to indicate mastery of the concepts covered in class today.**	**Respond to CFUs embedded in the guided notes to indicate mastery of the concepts covered in class today.**	**Respond to CFUs embedded in the guided notes to indicate mastery of the concepts covered in class today.**	**Respond to CFUs embedded in the guided notes to indicate mastery of the concepts covered in class today.**
End of the lesson You Do **Science:** Evaluate	**Determine what other materials might have been useful to determine what was inside the "Investigation Box."**	**Respond to CFUs embedded in the guided notes to indicate mastery of the concepts covered in class today.**	**Respond to CFUs embedded in the guided notes to indicate mastery of the concepts covered in class today.**	**Respond to CFUs embedded in the guided notes to indicate mastery of the concepts covered in class today.**	**Respond to CFUs embedded in the guided notes to indicate mastery of the concepts covered in class today.**
(05 MINUTES MAX) **Literacy Based closing activity:** Engage students in reading and writing tasks that assess their understanding of the lesson. Students are drawn back to the objective for the day.	Complete literacy-based Exit Ticket question on paper or in Microsoft Forms. (Questions will be based on what was discussed in lesson for the day.)	Complete literacy- based Exit Ticket question on paper or in Microsoft Forms. (Questions will be based on what was discussed in lesson for the day.)	Complete literacy- based Exit Ticket question on paper or in Microsoft Forms. (Questions will be based on what was discussed in lesson for the day.)	Complete literacy- based Exit Ticket question on paper or in Microsoft Forms. (Questions will be based on what was discussed in lesson for the day.)	Complete literacy- based Exit Ticket question on paper or in Microsoft Forms. (Questions will be based on what was discussed in lesson for the day.)
SPED Modification (s): What modifications are being made to accommodate the students receiving special services?	Extended time on assignments; ability to correct assignments; reduced number of problems Planned/preferential seating Allow breaks during class Extended time for testing; reduced choices on multiple choice tests Repeating directions verbatim				
ESL Modification (s): What modifications are being made to accommodate the students receiving special services?	Small group instruction Read aloud for assessments Interactive reader for computer assignments Extended time on assignments and tests Opportunity to redo assignments and correct tests based on teacher feedback Bilingual support provided by translated copies, peers, and dictionaries				

Assessment (s): How will you know that students have reached the objective? Assessments may include: Pre-assessment, formative assessments, summative assessment, post-assessment, discussions, performance, demonstration, etc.	Formative assessments from the CFUs embedded in the guided notes and the exit ticket.	Formative assessments from the CFUs embedded in the guided notes and the exit ticket.	Responses to the Classification of Matter classwork assignment.	Formative assessment of the answers to the review questions.	Formative assessments from the CFUs embedded in the guided notes and the exit ticket.
Corrective Activity (s): What will I do if the student doesn't understand the lesson?	-Weekly tutoring sessions -Peer tutoring partners. -Opportunity for corrections.	-Weekly tutoring sessions -Peer tutoring partners. -Opportunity for corrections.	-Weekly tutoring sessions -Peer tutoring partners. -Opportunity for corrections.	-Weekly tutoring sessions -Peer tutoring partners. -Opportunity for corrections.	-Weekly tutoring sessions -Peer tutoring partners. -Opportunity for test corrections.
Extension/Enrichment Activity (s): What will I do with students who understand quicker than others?	- Challenge students to tell you what they know about subatomic particles. - Have students construct an acrostic using the word "electron." Their final acrostic must have eight statements related to atomic structure; each one beginning with one of the letters in the assigned word. - Have students calculate the mass of an electron, based on a proton having a mass 1836 times greater than the mass of an electron. Have them compare their answers to an accepted value for the mass of an electron.				
Technology Integration: How will the students use technology to help them master the objective.	-Use district-issued electronic device to complete online assignments, formative assessments (exit tickets), and summative assessments.				

IN THE FOLLOWING PAGES:

ONLY COMPLETE SECTION(S) BELOW IF YOUR SUBJECT IS IDENTIFIED/LISTED

ALL SCIENCE (S): What is your **resource plan for each of the 5 Es** of inquiry-based science instruction? 1. Engage 2. Explore	**Engage** 1. Ch. 3 Section 1 Classroom Catalyst, TE pg. 69 2. Ch. 3 Section 2 Classroom Catalyst, TE pg. 74 3. Differentiated Instruction TE pg. 70 4. Quick Lab: Constructing a Model, TE/SE pg. 73 5. Demo: Cathode-Ray Tube, TE/SE pg. 75

3. Explain 4. Elaborate 5. Evaluate	**Interactive Video** 1. Modern Chemistry Web Resources: Atomic Theory & Structure 2. Modern Chemistry Web Resources: History of Atom and Hydrogen & Helium: Atomic Theory I: Cathode Rays, Electrons and the Nucleus 3. Atomic Theory II: Bohr and the Beginnings of Quantum Theory 4. Rutherford Scattering **Explore** **Laboratory Activities/Investigations** 1. Modern Chemistry p. 73 Quick Lab 2. PhET labs to accompany PhET simulations • Molecules and Light • Neon Lights and Other Discharged Lams • Photoelectric Effect • Wave on a String **Explain** **Articles** 1. History of Chemistry 2. Interactive Reader: Lesson 4.1 & Lesson 4.2 **Elaborate** 1. Careers in Chemistry: Nanotechnologist pg. 72 2. Modern Chemistry Science Standards Guide: PS1.11: Models of the Atom **Evaluate** 1. Ch. 3 Section 1 Formative Assessment, TE/SE pg. 73 2. Ch. 3 Study Guide 3. Alternative Assessment, TE pg. 77 4. Ch. 3 Section 2 Formative Assessment, TE/SE pg. 78
ALL SCIENCE (S): ***(Multiple opportunities to engage in science, Makes since of science content)*** What is your plan to incorporate technology while incorporating the 5E instructional model?	**SUGGESTED OPPORTUNITIES FOR TECHNOLOGY** 1. PhET Simulations 2. Microsoft Forms 3. Virtual Lab