A blue and grey logo with claws

Description automatically generated**2024-2025 Weekly Lesson Planning Document**

Template for the following:

Science, Social Studies, CTE, World Languages,

HPELW, Fine Arts, JROTC

Week of Monday, January 27, through Friday, January 31

**EDUCATOR’S NAME:** \_\_\_ Ms. Burton, Ms. Daughrity, Ms. Mitchell \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **SUBJECT:** \_\_\_\_\_\_Chemistry I\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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|  | **MONDAY** | **TUESDAY** | **WEDNESDAY** | **THURSDAY** | **FRIDAY** |
| **Lesson Title:**  **Unit:**  **Chapter:**  **Page Number(s):**  (It is suggested that you use your curriculum map.) | **Unit 6**  **Chapters 3/7/12:**  **All About the Mole**  **p. 234-236** | **Unit 6**  **Chapters 3/7/12:**  **All About the Mole**  **p. 236-238** | **Unit 6**  **Chapters 3/7/12:**  **All About the Mole**  **p. 236-238** | **Unit 6**  **Chapters 3/7/12:**  **All About the Mole**  **p. 239-241** | **Unit 6**  **Chapters 3/7/12:**  **All About the Mole**  **p. 239-241** |
| **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.PS1.1** Understand and be prepared to use values specific to chemical processes: the mole, molar mass, molarity, and percent composition. | | | | |

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| **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…**  Perform conversions between particles, moles, and the mass of a substance (using periodic table when needed). | | **I Can…**  Perform conversions between particles, moles, and the mass of a substance (using periodic table when needed). | **I Can…**  Explain what is meant by the percent composition of a compound. | **I Can…**  Determine the percent of sugar found in a sample of bubblegum. | | **I Can…**  Determine the empirical formula of a compound when given the molecular formula. |
| **Possible Misconception (s):**  What misconception(s) are you anticipating during this lesson? | It is easy to confuse the terms formula mass and molecular mass. Although they are calculated the same way, they refer to the mass of either an ionic compound or a molecular compound.  Students often mistakenly think that the subscripts in a compound’s formula reveal a mass ratio. Point out that the subscripts actually reveal an atom ratio and a mole ratio. A mass ratio can be obtained by converting amounts in moles to masses in grams.  When determining empirical formulas from mass data, students sometimes forget to find mole ratios. Instead, they mistakenly round the number of moles calculated for each element as each element’s subscript.  When students calculate mole ratios that are not close to a whole number, they CANNOT round to the nearest whole number. In those situations, students MUST remember to multiply ALL their ratios by a value that will lead to whole number ratios for all elements. | | | | | | |
| **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. | How many atoms of gold, Au, are in 3.60 x 102 grams of Au?  What is the correct conversion factor for this question? | How many atoms of gold, Au, are in 3.60 x 102 grams of Au?  Solve the problem! | | How many grams of ammonium sulfide, (NH4)2S, are present in 5.7 x 1024 formula units of ammonium sulfide? | Read the procedure for the “Percent Sugar in Bubblegum” lab activity and review the data table. | Based on your calculations from yesterday’s lab activity, was the percent of sugar in your sample of bubblegum greater or less than 50%? Did this value surprise you? Why or why not? | |
| **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)* * Lab Activity *(40 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 practice problems that involve converting between units of particles, moles, and formula units.** | **I will provide students with practice problems that involve converting between units of particles, moles, and formula units.** | | **I will model the method to calculate the percent of each element present in a chemical compound and provide practice problems for the students.** | **I will provide students with a sample of bubblegum and the equipment to measure masses. I will also provide the problem to solve: What percent of sugar is found in this bubblegum?** | **I will explain the concept of an empirical formula and give examples of how to determine empirical formulas when given molecular formulas.** | |
| **Middle of the lesson**  We Do  **Science:** Explain and Elaborate | **Work together with classmates to complete the “More Mole Problems” assignment.** | **Respond to CFUs embedded in the guided notes to indicate mastery of the concepts covered in class today.** | | **Work together to collect data that will allow the lab group to calculate the percent of sugar in a sample of bubblegum.** | **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 | **Begin the “More Mole Problems” assignment.** | **Complete the “More Mole Problems” assignment.** | | **Respond to CFUs embedded in the guided notes to indicate mastery of the concepts covered in class today.**  **Ask any questions I have concerning calculating the percent composition of each element in a compound.** | **Complete the Percent Sugar in Bubblegum lab report.** | **Respond to CFUs embedded in the guided notes to indicate mastery of the concepts covered in class today.**  **Ask any questions I have concerning determining the empirical formula when given a molecular formula.** | |
| **(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 Forums. Will be based on what was discussed in lesson for the day. | Complete literacy-based Exit Ticket question on paper or in Microsoft Forums. Will be based on what was discussed in lesson for the day. | | Complete literacy-based Exit Ticket question on paper or in Microsoft Forums. Will be based on what was discussed in lesson for the day. | Complete literacy-based Exit Ticket question on paper or in Microsoft Forums. Will be based on what was discussed in lesson for the day. | Complete literacy-based Exit Ticket question on paper or in Microsoft Forums. 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 assessment of responses to the “More Mole Problems” assignment. | | Formative assessment of responses to the “More Mole Problems” assignment. | Formative assessment of responses to the CFUs and Exit Ticket. | Formative assessment of responses to the lab activity. | | Formative assessment of responses to the CFUs and 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? | * Ask students to explain why the problem… ”Find the formula mass of potassium chlorate, KClO3” …cannot be written as “Find the molecular mass of potassium chlorate, KClO3 .” Students should recognize that KClO3 is an ionic compound, consisting of a metal cation and a polyatomic anion. Molecular mass applies only to molecules, not to ionic compounds. | | | | | | |
| **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. | | | | | | |

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| **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 3. Explain 4. Elaborate 5. Evaluate | **Engage**   1. Ch. 2 Section 2 Classroom Catalyst, TE p. 37 2. Ch. 2 Section 3 Classroom Catalyst, TE p. 48 3. Differentiated Instruction TE pp. 38-42; 48; 52; 57; 59-60.   **Interactive Video**   1. Chapter 2: Why It Matters: Measurements and Calculations   <https://my.hrw.com/content/hmof/science/hss2017/tn/gr9-12/hmd_chem_9781328833594_/dlo/whyitmatters/index.html?vid=1>  **Explore**  **Laboratory Activities/Investigations/Animations & Simulations**   1. Virtual Lab: Using Units and Measurements   <https://my.hrw.com/content/hmof/science/hss2017/tn/gr9-12/hmd_chem_9781328833594_/dlo/virtuallab/c02_00vl16/index.html>   1. PhET Simulation: “Density”   <http://phet.colorado.edu/en/simulation/density>   1. Uncertainty in Measurements   <http://antoine.frostburg.edu/cgi-bin/senese/tutorials/sigfig/index.cgi>   1. Precision and Accuracy   <http://www.learner.org/courses/learningmath/measurement/session2/part_c/accuracy.html>   1. “Rags to Riches” Game (Scientific Notation and the Metric System)   <http://www.quia.com/rr/83587.html>  **Explain**  **Textbook**   1. Units of Measurement, pp. 37-46 2. Using Scientific Measurements, pp. 48-61 3. Interactive Reader: Section 2.2 and 2.3   **Elaborate**   1. Cross-Disciplinary Connection: Classical Ideas About Matter (SE)   (HRW RESOURCE)   1. Differentiated Instruction (TE wrap) (HRW RESOURCE) 2. WebLinks  (HRW RESOURCE)   **Evaluate**   1. Ch. 2 Section 2 Formative Assessment, TE/SE p. 46 2. Ch. 2 Section 3 Formative Assessment, TE/SE p. 61 |
| **ALL SCIENCE (S):**  ***(Multiple opportunities to engage in science, Makes since of science content)***  What is yourplan to incorporate technology while incorporating the 5E instructional model? | **SUGGESTED OPPORTUNITIES FOR TECHNOLOGY**  1. PhET Simulations  2. Microsoft Forms  3. Virtual Lab |