

Krug Chemistry – Deep Run Daily Planning Guide

Date of Lesson: Q2 Day 21 – Empirical Formula Lab

Topic /Big Questions: (Question Stems & Question Creation Chart) <ul style="list-style-type: none"> • What are the ratios of elements in a compound? • What is the difference between an empirical formula and a molecular formula? • How do chemists determine empirical formulas in the lab? 	
State SOL CH.4	Unpacking the Standards (Video explanation shown at 3:18) CH.4 The student will investigate and understand that molar relationships compare and predict chemical quantities. Key ideas include a) Avogadro's principle is the basis for molar relationships; and b) stoichiometry mathematically describes quantities in chemical composition and in chemical reactions
Visible Learning (For the three items with asterisks*, think from a student perspective. Use simple language)	
*What am I learning today? Empirical and molecular formulas are used to show the chemical composition of a compound. Both of these are useful in determining the formula of a substance based on the mass of the elements of an unknown substance. The percent composition reflects the amount of each element within the compound.	
*Why is it important? Chemists use empirical formulas and molar masses to determine the composition of unknown substances.	
*How will I know I've learned it? I will be able to determine the empirical and molecular formulas of a compound given masses of elements that compose it and conduct an investigation to determine the percent composition and/or the empirical formula of a substance	
Differentiation strategies: Empirical Formula Lab Percent Composition and Molar Mass Worksheet Empirical and Molecular Formula Worksheet	
Accommodations and/or modifications are being met for students with IEP's/504's. Small group activities; frequent checks for understanding; materials available on Schoology	
Daily Plan/Sequence of Instruction: Yesterday students began the Empirical Formulas Lab . Today they will complete the procedure for Day 2. Teacher will offer assistance as needed. If students finish early, they may continue working on the Percent Composition and Molar Mass Worksheet and the Empirical and Molecular Formula Worksheet . Teacher will inform student to prepare for the Unit 7 Quiz which will occur at the beginning of the next class.	

Assessments (List all [formative](#)/[summative](#) assessments used to check for understanding during this lesson. Summative assessments may occur during a different class period.):

Empirical Formula Lab – (summative)

Percent Composition and Molar Mass Worksheet – (summative)

Empirical and Molecular Formula Worksheet – (summative)

After assessing today's lesson are you and your students comfortable moving forward with your next objective?

Yes - students can calculate percent composition, molar mass, empirical formula, and molecular formula

No, remediation required to proceed – students can come to One Lunch for help; if students fail the lab, they may do corrections for up to a 65%