

Krug Chemistry – Deep Run Daily Planning Guide

Date of Lesson: Q3 Day 8 – Unit 8 Quiz and Cu-AgNO₃ Lab

Topic /Big Questions: ([Question Stems](#) & [Question Creation Chart](#))

- What is a chemistry mole?
- How do chemists convert units into moles?
- How many (atoms, liters, or grams) are in a mole?
- How do chemists convert liters into grams? Or vice versa?
- How do chemists convert atoms into grams? Or vice versa?

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?** A mole is a unit of measurement used to indicate the ratio of reactants and products. The number of atoms (or molecules) in a mole is 6.022×10^{23} . At STP 22.4 L of gas are present in a mole. The average atomic mass on the periodic table is accepted as the number of grams in a mole of that element. Chemists use dimensional analysis to convert between units.

***Why is it important?** In order for chemical equations to be useful, there needs to be a way to measure the quantities of reactants and products. Stoichiometry involves quantitative relationships in a balanced equation which are based on mole ratios.

***How will I know I've learned it?** I will recognize the pattern in the dimensional analysis equation in order to convert between units of moles, liters, grams, atoms, and molecules.

Differentiation strategies:

Roadmap to Stoichiometry

Stoichiometry Formula Guide

Unit 8 Quiz

Cu-AgNO₃ Lab

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; small group testing

Daily Plan/Sequence of Instruction:

Teacher check **Mole Ratio Stoichiometry Homework** for completion and go over the problems on the board. Students will refer to the laminated copy of the **Roadmap to Stoichiometry**. (Digital copies are also available on Schoology.) Teacher will also show students how to access the **Stoichiometry Formula Guide** on Schoology.

Next students will take the **Unit 8 Quiz**, which is on paper. Students must show work for credit. Students may use the **Roadmap to Stoichiometry** during the quiz.

Next Teacher will explain the procedure for the **Cu-AgNO₃ Lab**. Students will follow the procedure and answer the questions on the Lab worksheet. If time permits, teacher will ask groups to compare their results.

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

Unit 8 Quiz – (summative)

Cu-AgNO₃ Lab – (summative)

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

Yes - students scored 80% or higher on the Unit 8 Quiz and Cu-AgNO₃ Lab

No, remediation required to proceed – Parent/guardian will be informed if students fail the quiz; students will be allowed to correct their mistakes for a 65% passing score; tutoring will be available during One Lunch