

Krug Chemistry – Deep Run Daily Planning Guide

Date of Lesson: Q1 Day 16 – Atomic Structure & Average Atomic Mass

Topic /Big Questions: (Question Stems & Question Creation Chart) <ul style="list-style-type: none">• What are the properties of subatomic particles?• How do subatomic particles determine identity of elements?• How does abundance of isotopes affect atomic mass?	
State SOL CH1 CH 2	Unpacking the Standards (Video explanation shown at 3:18) CH.1 The student will demonstrate an understanding of scientific and engineering practices by f) obtaining, evaluating, and communicating information CH2 The student will investigate and understand that elements have properties based on their atomic structure. The periodic table is an organizational tool for elements based on these properties. e) historical and quantum models. Atoms are the basic building blocks of all matter. The properties of an atom are based on the number and arrangement of its parts.
Visible Learning (For the three items with asterisks*, think from a student perspective. Use simple language)	
*What am I learning today? Atoms are made of protons, neutrons, and electrons. The number of each particle determines the properties of the atom and type of element. The abundance of isotopes determines the average atomic mass as shown on the periodic table.	
*Why is it important? Understanding the properties of atomic structure explains the arrangement of the elements on the periodic table and the trends in their physical and chemical properties.	
*How will I know I've learned it? I will identify the mass, charge, and location of subatomic particles. I will understand that atomic number is related to the number of protons. I will calculate mass # and average atomic mass.	
Differentiation strategies: Atomic Structure Power Point Atomic Structure and Average Atomic Mass Worksheet Bozeman Mass Spectroscopy Video - https://www.youtube.com/watch?v=mBT73Pesioq Mass Spec Lab Activity worksheet	
Accommodations and/or modifications are being met for students with IEP's/504's. Access to all materials on Schoology, frequent checks for understanding; CER activity in small groups;	
Daily Plan/Sequence of Instruction: Teacher will use Atomic Structure PowerPoint to help students investigate the properties of subatomic particles. Students will complete Atomic Structure & Average Atomic Mass Worksheet . Teacher will show the Bozeman Mass Spectroscopy video and explain how Mass Spec is used to determine abundance of isotopes. Students will complete Mass Spec Lab Activity worksheet .	

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

Atomic Structure PowerPoint questions (formative)

Atomic Structure & Average Atomic Mass worksheet (summative)

Mass Spec Lab Activity worksheet (summative)

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

Yes - students actively participated and scored 80% or higher on their worksheets

No, remediation required to proceed – teacher will contact parents if students are off task and do not complete work

Teacher reflection: