Krug Chemistry – Deep Run Daily Planning Guide

Date of Lesson: Q1 Day 17 – Unit 3 Quiz, Nuclear Chemistry

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

- **How has the model of the atom changed over time?**
- **What merits and limitations did each model have?**
- **How can the properties of an atom explain the nature of matter?**
- **How do atoms decay?**

State SOL	Unpacking the Standards (Video explanation shown at 3:18)
CH1	CH.1 The student will demonstrate an understanding of scientific and engineering practices by f) obtaining, evaluating, and communicating information
CH 2	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?** Atomic theory, Atomic Structure, Average Atomic Mass, and Nuclear Chemistry

***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 score 80% or higher on the quiz. I will complete the Nuclear Chemistry Activities.

Differentiation strategies:

Small Group Testing for quiz

Radioactive Decay PowerPoint and Worksheet

PhET Simulations: Alpha Decay, Beta Decay, and Radioactive Dating Game

Accommodations and/or modifications are being met for students with IEP's/504's.

Access to all materials on Schoology, frequent checks for understanding; small group testing for quiz

Daily Plan/Sequence of Instruction:

Students will have 30 minutes to complete the Unit 3 Quiz. After the quiz, teacher will explain Nuclear Chemistry using the Radioactive Decay PowerPoint. Students will complete the Radioactivity Decay and Half Life Worksheet and explore the PhET Simulations below:

https://phet.colorado.edu/en/simulation/legacy/alpha-decay

https://phet.colorado.edu/en/simulation/legacy/beta-decay

https://phet.colorado.edu/en/simulation/legacy/radioactive-dating-game

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

Unit 2 Quiz (summative)

Radioactive Decay and Half-Life worksheet (summative)

PhET Simulations (formative)

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

Yes - Students scored 80% or higher on Unit 3 Quiz

No, remediation required to proceed – teacher will contact parents if students fail the quiz; students may obtain tutoring during One Lunch before the test

Teacher reflection: