

Krug Chemistry – Deep Run Daily Planning Guide

Date of Lesson: Q1 Day 13 – Unit 2 Review, Honors IRP Background Research, Article Summary

Topic /Big Questions: (Question Stems & Question Creation Chart) <ul style="list-style-type: none"> • How is matter classified? • How do heat and temperature affect matter? • IRP Background Research <ul style="list-style-type: none"> ➢ Did students find enough supporting facts? ➢ Did students use scientific journals as resources? ➢ Did students cite sources properly? 	
State SOL CH1 CH 2 CH 6 CH7	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 Central Idea: The properties of elements, to include the periodic trends, are based on their atomic structure. The periodic table is an organizational tool that allows for the prediction of chemical and physical properties. CH 6 Central Idea: The movement of atoms and the relationship of energy and the phases is outlined in the Kinetic Molecular Theory. The gas laws describe the relationships of pressure, volume, temperature and number of particles of a gas. CH.7 The student will investigate and understand that thermodynamics explains the relationship between matter and energy. Key ideas include a) heat energy affects matter and interactions of matter; b) heating curves provide information about a substance;
Visible Learning (For the three items with asterisks*, think from a student perspective. Use simple language)	
<p>*What am I learning today? Matter can be classified based on physical and chemical properties. Pure substances and mixtures have different types of particles and arrangements. Heat and temperature affect the state of matter.</p> <p>IRP – In order to construct and defend a scientific viewpoint, one must gather information from previous research and cite the sources properly.</p>	
<p>*Why is it important? Understanding how heat and temperature affect matter is important because chemicals have different melting and boiling points. It is also important for proper handling and storage of chemicals.</p> <p>IRP – Using previous scientific research will provide evidence to support the current hypothesis and citing sources gives credibility to the research</p>	
<p>*How will I know I've learned it? Students will identify the properties and states of matter. Students will calculate density. Students will understand that heat is a form of energy, and temperature is a measure of the movement of particles that contain heat energy. Students will be able to interpret a Phase Diagram and a Heat Curve. Students will be able to calculate specific heat of matter.</p> <p>IRP – Students can follow the rubric provided in the IRP Background Research folder in Schoology</p>	

[Differentiation strategies:](#)

Quizlet Live Review Games

Density and Specific Heat – go over homework problems

IRP Background Research – help Honors with finding scientific journals

Science Article Summary

Unit 2 Test Review – due next class

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 games

Daily Plan/Sequence of Instruction:

Due to planned fire drills and half days, we are usually a little behind in one or two classes. So I use this as a catch up day. I may do all or just a few of the strategies listed above depending on how far behind we are.

Quizlet Live – Use Unit 1 and Unit 2 Quizlet files to play review games. *(Only if time allows)*

Homework – Students struggle with density and specific heat calculations. Go over homework and additional problems to re-inforce concept.

IRP – Honors Students Background Research is due today. Students struggle with finding scientific journals and other qualified sources. Help students find sources and site them properly.

Science Article Summary - Students will read a short article from a science magazine. (I have real magazines that I make them use. They spend enough time on line!) Students will follow **the Science Article Rough Draft Template** to fill in the author, publisher, date, and article title. Then they will write a brief summary. Explain proper citation techniques. Show **Final Draft Example – Block 1**. Explain the importance of citing the source and avoiding plagiarism. Students will share their summaries with a partner for the editing process. Then make any necessary changes and turn in the summary at the end of class.

Unit 2 Test Review - Due by the beginning of class on the day of the test. Allow students to start working on it now and ask questions if they need help.

Otherwise, anyone who has been absent, can use this time to catch up on whatever assignments they have missed.

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

Quizlet Live (formative)

IRP Background Research (summative – check point)

Science Article Summary – (summative)

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

Yes - Students actively participated and score 80% or higher on Unit 2 Test Review; honors students score 80% or higher on Background Research

No, remediation required to proceed – If students need help with Test Review or Background Research, they can get assistance during One Lunch

Teacher reflection: College prep students may also need help with specific heat lab calculations. Some students will struggle to keep the information for copper separate for the information for steel. They have trouble understanding what the numbers truly mean. When working one-on-one, make the students tell you what the mass and temperatures are for each variable in the equation. Help them understand that the + and – signs only represent the direction of energy flow, but the quantity of energy remains constant. So the heat leaving the metal is the same amount of heat entering the water.